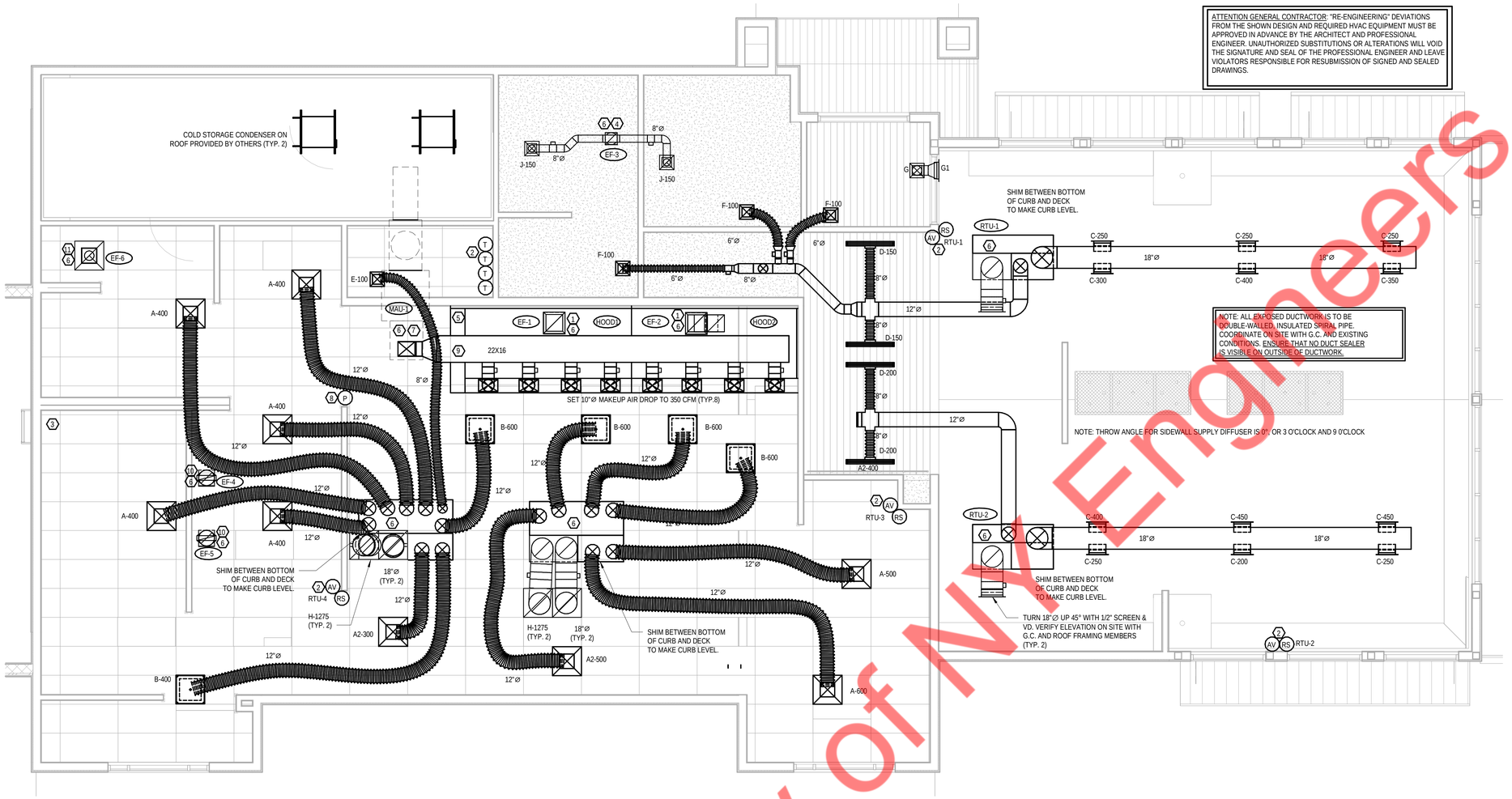

ATTENTION GENERAL CONTRACTOR: "RE-ENGINEERING" DEVIATIONS FROM THE SHOWN DESIGN AND REQUIRED HVAC EQUIPMENT MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND PROFESSIONAL ENGINEER. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER AND LEAVE VIOLATORS RESPONSIBLE FOR RESUBMISSION OF SIGNED AND SEALED DRAWINGS.

CONTRACTORS NOTES

HVAC CONTRACTOR

1. THE HVAC CONTRACTOR IS TO FURNISH AND INSTALL THE HOODS, ROOF-TOP UNITS, EXHAUST FANS, DUCTWORK, INSULATION WRAP, DIFFUSERS, SMOKE DETECTORS, AND TEMPERATURE CONTROLS.

2. THE HVAC CONTRACTOR IS TO VERIFY LOCATIONS FOR EF-1, EF-2, AND THE HOODS ON SITE FROM MOST-RECENT KITCHEN EQUIPMENT PLANS. ALL FANS ARE TO BE UL LISTED.

3. ALL HVAC EQUIPMENT CURBS ARE TO BE SUPPLIED BY THE HVAC CONTRACTOR.

4. ALL RTU CURBS ARE TO BE FABRICATED FROM 18 GA. GALVANIZED METAL WITH FULLY WELDED SEAMS, WATER TIGHT AND INTERNALLY INSULATED. FACTORY CURB CONVERSION SHALL NOT BE ACCEPTED.

5. SHIMS ARE TO BE PROVIDED BY HVAC CONTRACTOR BETWEEN THE ROOF DECK AND THE CURBS TO COMPENSATE FOR ROOF PITCH.

6. ALL FLEX DUCT IS TO BE U.L. LISTED, R-6, FOIL-BACKED, CLASSIFIED AS A CLASS 1 AIR DUCT. MAXIMUM LENGTH PER LOCAL CODE.

7. ALL METAL DUCT AND AIR DISTRIBUTION DEVICES ARE TO BE INSULATED WITH R-6, 2" X .75 DENSITY FOIL-BACKED INSULATION, WITH FIRE AND SMOKE RATING [25]-[50].

8. ALL DUCTWORK IS TO BE INDEPENDENTLY HUNG FROM STRUCTURAL MEMBERS.

9. ALL DUCTWORK IS TO BE FABRICATED, INSTALLED, SEALED, AND EXTERNALLY INSULATED PER SMACNA LOW-VELOCITY DUCT MANUAL (LATEST ISSUE). INTERNALLY LINED DUCTWORK IS NOT ALLOWED.

10. UNLESS OTHERWISE NOTED, ALL SUPPLY TAKEOFFS ARE TO HAVE A MANUAL VOLUME CONTROL DAMPER.

11. THE HVAC CONTRACTOR IS TO COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.

12. THE HVAC CONTRACTOR IS TO FURNISH A WRITTEN GUARANTEE COVERING A ONE-YEAR PERIOD FOR ALL HVAC EQUIPMENT AND PROVIDE AN ADDITIONAL FOUR-YEAR PERIOD FOR THE COMPRESSORS IN THE RTUS. ALL FANS TO BE U.L. LISTED.

13. UPON COMPLETION OF PROJECT THE HVAC CONTRACTOR IS TO HIRE AN A.A.B.C. OR N.E.B.B. CERTIFIED, INDEPENDENT TEST AND BALANCE COMPANY TO CONDUCT A COMPLETE, CERTIFIED TEST AND BALANCE OF ALL HVAC EQUIPMENT. PROVIDE A WRITTEN REPORT TO NCA CONSULTANTS. ALL CAPACITIES MUST BE SET TO AMOUNTS INDICATED ON THE FLOOR PLANS AND SCHEDULES.

14. THE HVAC CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING FINAL CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING TEMPERATURE CONTROLS, RTUS, AND SMOKE DETECTORS.

15. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/ SMOKE RATED WALLS / BARRIERS / SLABS. COORDINATE WITH ARCHITECTURAL DRAWING FOR RATING OF THE WALL.

GENERAL CONTRACTOR

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RECEIVE, OFFLOAD, AND STORE ALL HVAC MATERIALS WHICH ARRIVE AT THE JOB SITE. ALL MATERIAL MUST BE STORED INSIDE THE BUILDING. HOODS MUST BE STORED IN THE KITCHEN.

2. IT IS VERY IMPORTANT THAT ACCURATE MEASUREMENTS ARE USED WHEN LOCATING EXHAUST FAN ROOF OPENING. COORDINATE ROOF OPENINGS WITH THE KITCHEN EQUIPMENT PLAN AND EXHAUST HOOD PLANS. OBTAIN THE CORRECT PLANS FROM THE KITCHEN EQUIPMENT SUPPLIER.

3. RTU ROOF OPENING SIZES AND ROOF CURBS ARE BASED ON EQUIPMENT SHOWN. IF OTHER EQUIPMENT IS USED, VERIFY ROOF OPENING REQUIREMENTS. MAKE PENETRATION AS NEEDED FOR INSTALLATION OF NEW CURB AND RTU. COORDINATE ON SITE WITH HVAC CONTRACTOR. ENSURE THAT ROOFING MATERIAL DOES NOT COVER THE TOP OF ANY HVAC EQUIPMENTCURB.

4. ALL ROOF, CEILING, WALL, AND STRUCTURAL FRAMING REQUIRED FOR UNIT, FAN, DUCT, DIFFUSER, AND ALL OTHER HVAC WORK IS TO BE BY THE G.C. COORDINATE ON SITE WITH HVAC CONTRACTOR. GENERAL CONTRACTOR IS TO PROVIDE ANY SCREENING, GUARD RAILS, ETC. FOR ROOF-MOUNTED HVAC EQUIPMENT PER IBC AND LOCAL CODES. ANY REQUIRED PAINTING OF HVAC WORK IS TO BE BY THE GENERAL CONTRACTOR.

5. IF NECESSARY THE GENERAL CONTRACTOR IS TO REMOVE, REPLACE, AND/OR REPAIR CEILING GRID AND TILES IN ORDER FOR THE HVAC WORK TO BE PERFORMED.

ELECTRICAL CONTRACTOR

1. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL PITCH POCKETS FOR POWER AND CONTROL WIRING, AND IS TO MAINTAIN 12" MINIMUM CLEARANCE FROM BACK PANEL OF AIR CONDITIONING UNITS. DO NOT PENETRATE BOTTOM OF RTU CURB.

2. THE ELECTRICAL CONTRACTOR IS TO INSTALL LOW-VOLTAGE CONTROL WIRING FOR ALL AIR CONDITIONING CONTROLS.

3. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL DISCONNECTS FOR RTUS, WIRE THE RESTROOM EXHAUST FAN TO RUN CONTINUOUSLY WHILE THE DINING ROOM LIGHTS ARE ON, AND WIRE KITCHEN / HOOD EXHAUST FANS THROUGH THE OCCUPIED / UNOCCUPIED PANEL. NOTE: IF THE PANEL IS NOT UTILIZED, AND IF THE HOOD FANS ARE NOT CONTROLLED BY TEMPERATURE PROBES IN THE HOOD DISCHARGE COLLARS (SEE HOOD DETAILS, THIS SET) THEN THE ELECTRICAL CONTRACTOR IS TO WIRE THE KITCHEN / HOOD FANS TO BE ENERGIZED DURING STORE OPERATIONAL HOURS.

4. THE ELECTRICAL CONTRACTOR IS TO USE A MINIMUM OF 4'-6" SEALTITE FLEXIBLE CONDUIT WHEN WIRING KITCHEN HOOD EXHAUST FANS ON ROOF SO THAT FANS MAY BE REMOVED FROM CURBS AND PLACED ON ROOF FOR CLEANING EXHAUST DUCTWORK.

5. FOR EACH UNIT, THE ELECTRICAL CONTRACTOR IS TO PROVIDE ONE SINGLE-GANG RECEPTACLE TEST STATION FOR THE REMOTE SENSOR AND/OR T-STAT, AND ONE DOUBLE-GANG RECEPTACLE TEST STATION FOR THE ANNUNCIATOR, WITH GREEN AND RED LIGHT INDICATORS. THE FIRE AND MECHANICAL INSPECTORS WILL DETERMINE SUITABLE LOCATION FOR TEST STATIONS. ANNUNCIATORS AND TEST STATION WILL BE LOOPED IN THE CIRCUITRY OF THE SMOKE DETECTION DEVICES. WIRING WILL BE INSTALLED BY ELECTRICAL CONTRACTOR.

PLUMBING CONTRACTOR

1. THE PLUMBING CONTRACTOR IS TO PROVIDE AND INSTALL CONDENSATE DRAINS/GAS PIPING FOR ALL HVAC EQUIPMENT, AND PITCH POCKETS FOR RTU CONNECTIONS. DO NOT PENETRATE BOTTOM OF RTU CURB.

2. THE PLUMBING CONTRACTOR IS TO COORDINATE PLUMBING VENT STACKS AND WATER HEATER FLUES WITH OUTSIDE AIR INTAKES OF A/C UNITS. 10'-0" MINIMUM CLEARANCE REQUIRED OR PER LOCAL CODE.

3. THE PLUMBING CONTRACTOR IS TO PROVIDE AND INSTALL FLUE GAS EXHAUST VENT FOR WATER HEATER. MAINTAIN 10'-0" MINIMUM CLEARANCE TO AIR INTAKES, OR PER LOCAL CODE. COORDINATE ON SITE WITH G.C. AND HVAC CONTRACTOR.

PLENUMIZED CURB INSTALLATION NOTES

1. CAREFULLY LOCATE AND MARK ROOF CURB LOCATIONS SO THAT DUCT WORK CAN BE INSTALLED IN THE APPROXIMATE LOCATIONS AS SHOWN BY THE FLOOR PLAN. PAY ATTENTION TO THE LOCATION OF THE ROOF STRUCTURE IN ORDER TO ACCOMMODATE THE DUCT DROPS.

2. MARK THE EXACT LOCATION OF EACH ROOF CURB. LAY OUT ALL EQUIPMENT LOCATIONS IN ORDER TO MAINTAIN PROPER CLEARANCES FROM EXHAUST FANS AND VENTS AS WELL AS PROVIDING FOR PROPER SERVICE CLEARANCES.

3. GENERAL CONTRACTOR SHALL CUT ROOF DECKING MATERIAL TAKING CARE TO AVOID CUTTING ANY STRUCTURAL COMPONENTS. GENERAL CONTRACTOR SHALL ALSO INSTALL ANY NECESSARY FRAMING OR BLOCKING AT OPENINGS.

4. WITH ROOF CURB UPSIDE DOWN (SOLID METAL BOTTOM UP) MEASURE AND MARK THE LOCATION OF ANY JOISTS OR OTHER FRAMING MEMBERS THAT MUST BE AVOIDED. MEASURE AND MARK THE LOCATION OF ALL THE DUCT TAPS.

5. CUT ALL DUCT TAPS INTO THE BOTTOM PANEL OF THE ROOF CURB. BE CAREFUL NOT TO DAMAGE THE ROOFING SURFACE WHILE MAKING THESE CUTS.

6. INSTALL DUCT TAP FITTINGS AND MANUAL DAMPERS INTO THE OPENINGS PREVIOUSLY CUT. SEAL ALL CONNECTIONS ON BOTH THE BOTTOM AND THE TOP SIDES OF THE TAPS.

7. FLATTEN TAB OF START COLLAR INSIDE CURB, TIGHT AGAINST INSULATION. SEAL INSIDE OF COLLAR AND TABS TO INSULATION USING MASTIC DUCT SEALER. ALLOW SEALER TO DRY PRIOR TO PROCEEDING.

8. APPLY DUCT SEALER TO OPEN END OF COLLAR. SLIDE INNER CORE OF FLEXIBLE DUCT ONTO COLLAR, AND CONNECT PANDUIT STRAP PER MANUFACTURERS INSTRUCTIONS.

9. SLIDE OUTER INSULATION SLEEVE OF FLEX TIGHT TO BOTTOM OF CURB. SEAL INSULATION TO BOTTOM OF CURB WITH PRESSURE-SENSITIVE FOIL TAPE. DO NOT USE TAPE MEANT FOR RIGID DUCTBOARD. SQUEEGEE OUT ALL AIR BUBBLES FOR PROPER ADHESION.

10. TURN CURB RIGHT SIDE UP, LEVEL CURB BETWEEN BOTTOM OF CURB AND DECK, INSTALL IN ROOF OPENING. SECURE CURB TO ROOF FRAMING AS REQUIRED.

11. GENERAL CONTRACTOR OR ROOFING CONTRACTOR SHALL FLASH AND ROOF IN THE CURB AS DETAILED ON THE DRAWINGS.

12. INSIDE BUILDING, THE DUCT RUNS SHALL BE INSTALLED FROM THE TAPS TO THE DIFFUSER LOCATIONS AS SHOWN ON THE PLANS. SUPPORT PER SMACNA AND LOCAL CODES.
13. NOTE: IF NECESSARY, FLEX DROPS MAY BE CONNECTED TO TAPS AFTER CURB HAS BEEN INSTALLED. REFER TO STEPS #8 AND #9.

KEYED NOTES

1. PROVIDE TYPE-I GREASE HOOD OVER APPLIANCES. PROVIDE 16 GAUGE BLACK IRON SHEETMETAL DUCT, WELDED LIQUID-TIGHT, FROM CONNECTION ON HOOD TO EXHAUST FAN ON ROOF. ALL WORK IS TO CONFORM WITH NFPA96 AND LOCAL CODES, INCLUDING THE PROVISION OF FIRE WRAP AND ACCESS DOORS. VERIFY AND ROUTING PRIOR TO FABRICATION OR INSTALLATION. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. REFER TO HOOD DETAIL SHEETS, THIS SET. CONFIRM LOCATION ON SITE WITH MOST RECENT KITCHEN EQUIPMENT PLANS.
2. PROVIDE REMOTE TEMPERATURE SENSOR 66" A.F.F. IN A WALL NEAR LOCATION SHOWN. SEAL WALL OPENINGS WITH CAULK. AUDIO-VISUAL ANNUNCIATOR TIED INTO SMOKE DETECTOR. T-STATS IN MANAGERS OFFICE. COORDINATE LOCATIONS ON SITE WITH G.C. AND EQUIPMENT. AVOID SOURCES OF HEAT. INSULATE BACKS SENSORS.
3. IF GAS FIRED: CONCENTRIC WATER HEATER FLUES TO WEATHERPROOF ROOF CAPS PROVIDED BY PLUMBING CONTRACTOR. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. USE FACTORY-MANUFACTURED PIPE AND FITTINGS ONLY.
4. RUN 10X10 EXHAUST DUCT TO EXHAUST FAN ON ROOF AS SHOWN. OFFSET AND TRANSITION AS NEEDED.
5. UTILITY CABINET HOUSES HOOD CONTROLS AND FIRE SUPPRESSION TANKS.
6. SHIM CURBS ON ROOF IN ORDER TO MAKE TOP OF CURBS LEVEL. SEE DETAIL ON SHEET M-2. CONFIRM STRUCTURAL FRAMING ON SITE PRIOR TO LAYING OUT ROOF PENETRATIONS.
7. PROVIDE MAKEUP AIR FAN WITH DUCTWORK TIED INTO HOOD COLLARS AS SHOWN. SET EACH 10"Ø DROP TO 350 CFM EACH. VERIFY AND ROUTING PRIOR TO FABRICATION OR INSTALLATION. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. REFER TO HOOD DETAIL SHEETS, THIS SET. CONFIRM LOCATION ON SITE WITH MOST RECENT KITCHEN EQUIPMENT PLANS.
8. MANUAL PULL STATION FOR HOOD FIRE SUPPRESSION SYSTEM. VERIFY WITH G.C. LOCAL AUTHORITY NUMBER OF PULLS, FINAL LOCATION(S,) AND HEIGHT ABOVE FINISH FLOOR.
9. SHEETMETAL TRUNKLINE FABRICATED, INSTALLED, SEALED, AND EXTERNALLY INSULATED PER SMACNA AND LOCAL CODES. VERIFY ROUTING ON SITE PRIOR TO FABRICATION. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED.
10. ROUTE TWO 4X16 STAINLESS STEEL DROPS FROM COLLARS ON DISHWASHER TO 10"Ø DROP FROM FANS ON ROOF. WELD ALL SEAMS AND JOINTS LIQUID TIGHT, BURNISH AND POLISH ALL WELDS FOR EXPOSED APPLICATION. ENSURE SYMMETRY OF DROPS FOR BALANCING PURPOSE. VERIFY LOCATIONS ON SITE PRIOR TO FABRICATION.
11. AS WELL AS ONE 10"Ø DROP FROM THE EXHAUST GRILLE OVER THE MOP SINK TO THE TO THE FAN ON THE ROOF. WELD ALL SEAMS AND JOINTS LIQUID TIGHT, BURNISH AND POLISH ALL WELDS FOR EXPOSED APPLICATION.

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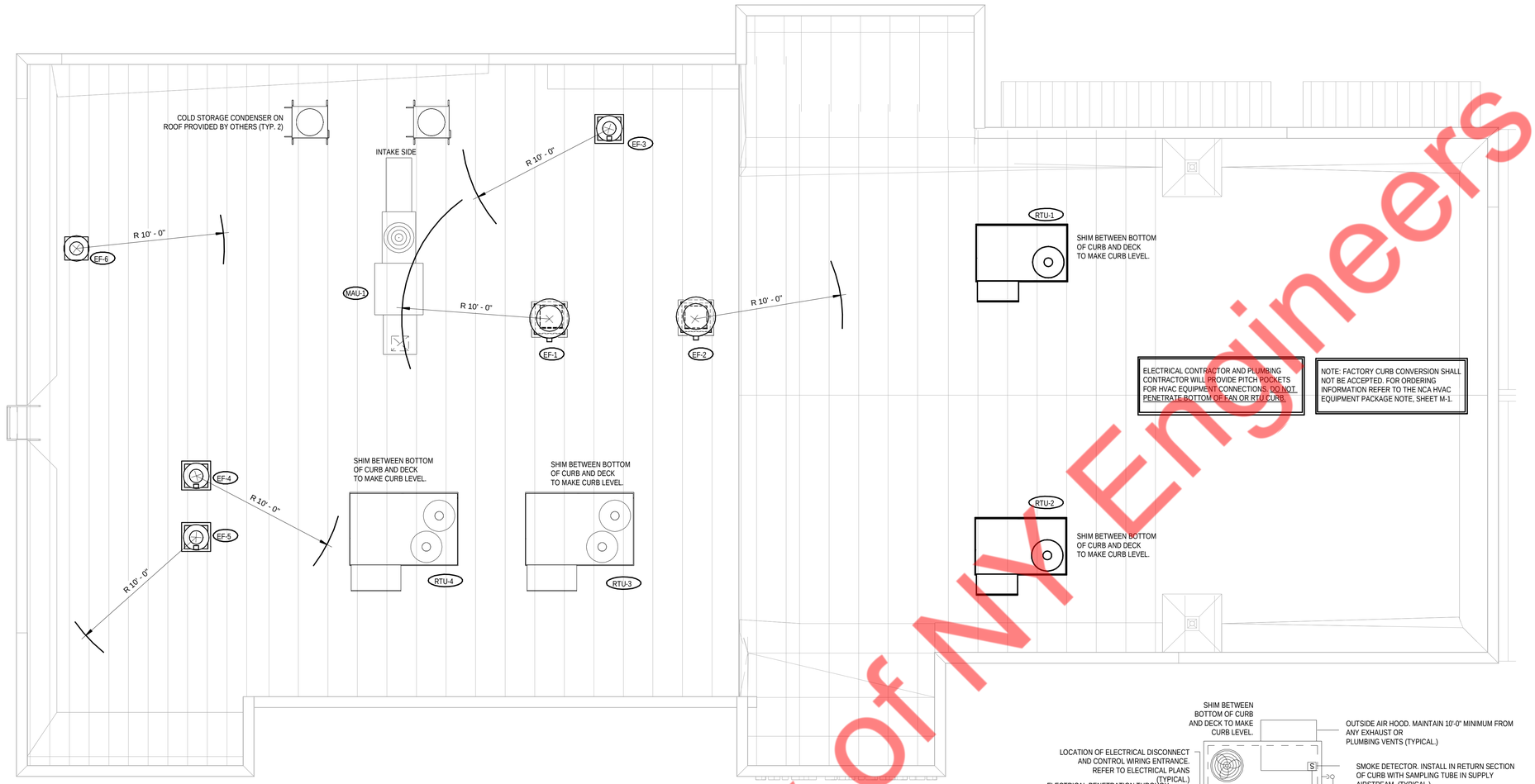

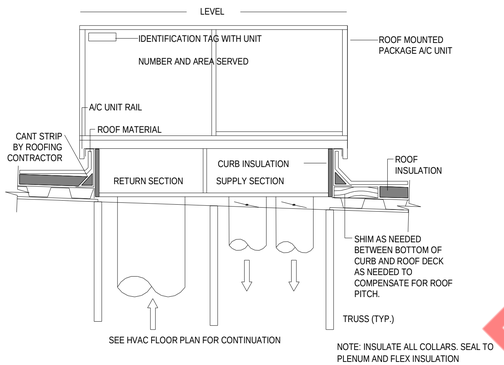

DUCT RISER/LEVELING DETAIL

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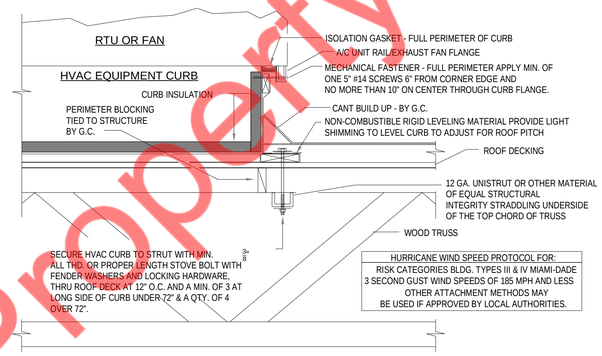

ACCEPTABLE FOR 170 MPH ZONE

ROOF EQUIP. CURB MOUNTING DETAIL

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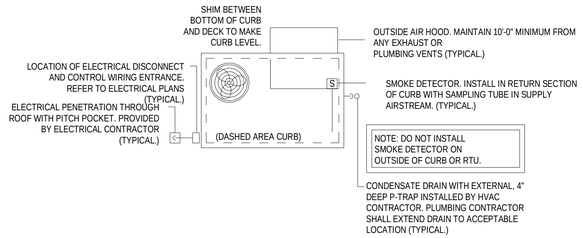
ACCEPTABLE FOR 170 MPH WIND ZONE



RTU ROOF CONNECTIONS/ACCESSORIES DETAIL

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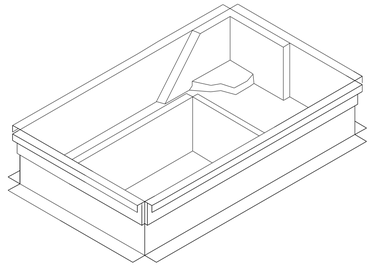

FACTORY CURB CONVERSION SHALL NOT BE ACCEPTED.

NCA PLENUMIZED AC CURB DETAIL

NOT TO SCALE

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PACKAGE ROOFTOP UNIT SCHEDULE (RTU-1,2,3,4)

TAG	RTU-3,4	RTU-1,2
MANUFACTURER	CARRIER	CARRIER
MODEL	50FCM09 (8.5 TON)	50FCA07 (6 TON)
LOCATION, CURB DIMENSIONS	ROOF, 78" X 50"	ROOF, 67" X 37"
TYPE OF HEAT	ELECTRIC STRIP	ELECTRIC STRIP
TOTAL COOLING CAPACITY, MBTU/HR	101.8	72.4
SENSIBLE COOLING CAPACITY, MBTU/HR	79.0	55.6
ENTERING AIR CONDITIONS, DB°F/WB°F	80/67	80/67
AMBIENT AIR DB TEMPERATURE, °F	95	95
SUPPLY AIR, CFM	3400	2400
OUTSIDE AIR, CFM	SEE SCHEDULE	SEE SCHEDULE
EXTERNAL STATIC PRESSURE, "WG	0.75	0.75
BHP - MEDIUM STATIC MOTOR	2.4	1.76
I.E.E.R.	15.2 (I.E.E.R.)	15.2 (I.E.E.R.)
ELECTRIC HEAT, KW	7.8	4.9
UNIT WEIGHT, LBS.	1050	750
ELECTRICAL REQUIREMENT, V/PHASE/HZ	208/3/60	208/3/60
MINIMUM CIRCUIT AMPERAGE	41	28
MAXIMUM OVER CURRENT PROTECTION	50	45

ACCESSORIES:
1. MOTORIZED 25% OUTSIDE AIR DAMPER WITH HOOD ASSEMBLY - TO CLOSE AFTER HOURS
2. NCA PLENUMIZED CURB. TO ORDER CALL TOLL-FREE (877) 530-0078 OR EMAIL MARKETING@NCACONSULTANTS.COM
3. ONE YEAR COMPLETE PARTS AND LABOR WARRANTY
4. ADDITIONAL FOUR YEAR PARTS WARRANTY COVERING COMPRESSORS
5. SMOKE DETECTOR (SEE HVAC ROOF PLAN, SHEET M-1.1)
6. AQUAGUARD AG-3180E MOISTURE SENSOR FOR PRIMARY PAN
7. ECONOMIZER WITH FDD FOR ALL RTUs

NOTE: COORDINATE RTU PLACEMENT ON SITE PRIOR TO SETTING EQUIPMENT. IF ADJUSTMENT IS NECESSARY MAINTAIN FRESH AIR INTAKE CLEARANCES

FAN SCHEDULE

UNIT NUMBER	EF-1,2	MAU-1	EF-3	EF-4,5	EF-6
AREA SERVED	HOOD	HOOD	RESTROOMS	DISHWASHER	MOP SINK
MANUFACTURER	CAPTIVE AIRE	CAPTIVE AIRE	CAPTIVE AIRE	CAPTIVE AIRE	CAPTIVE AIRE
MODEL	DU180HFA	A1-15D-MPU	DR10HFA	DU10HFA	DU10HFA
CFM	2300 EACH	2800	300	200 EACH	250
STATIC PRESSURE, "WG	1.25	0.90	0.25	0.25	0.25
FAN HORSEPOWER	1.5	2.0	0.06	0.18	0.18
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
RPM	1087	VIF	1299	1238	1238
ELECTRICAL V/∅/HZ	208/3/60	208/3/60	120/1/60	120/1/60	120/1/60
NCA CURB LXWXH	26.5X26.5X20	113X21X20	17.5X17.5X12	17.5X17.5X12	17.5X17.5X12
ACCESSORIES	B,D,E,F,H,J,K,L,M	A,B,D,E,H,J,K,L,M,N	A,B,C,D,E,G,H,L,M	A,B,C,D,E,H,J,L,M,P	A,B,C,D,E,H,J,L,M,P
MASS, WITH CURB	250 LBS. EACH	1200 LBS.	75 LBS.	100 LBS.	100 LBS.

NOTES/ACCESSORIES
A. ALUMINIZED BIRDSCREEN
B. SAFETY DISCONNECT SWITCH
C. GRAVITY BACKDRAFT DAMPER
D. AMCA SEAL & U.L. CERTIFIED
E. SPEED CONTROL
F. DISCHARGE >42" ABOVE ROOF
G. INTERLOCK WITH DINING AREA LIGHTS
H. 12" HIGH PREFABRICATED ROOF CURB
J. INTERLOCKED BY ELECTRICAL PER NFPA96 & LOCAL CODE
K. REFER TO KITCHEN BALANCE SCHEDULE
L. ENSURE 10' - 0" MINIMUM INTAKE/EXHAUST CLEARANCES
M. COORDINATE WITH MANUFACTURER FOR FINAL SELECTION
N. 60MBTUH COOLING SECTION, 21.0 MCA, 30A MOCP
P. INTERLOCK WITH KITCHEN LIGHTS

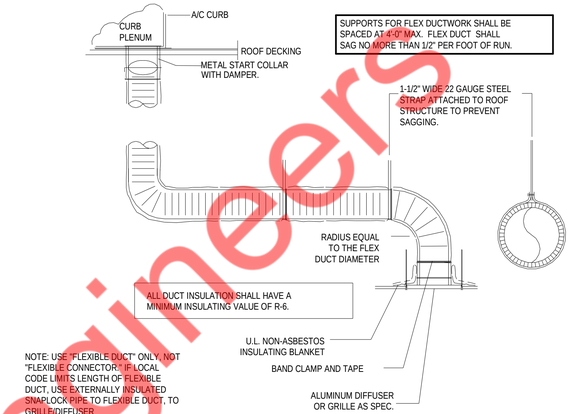
AIR BALANCE SCHEDULE

TAG	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR	BLDG. PRESSURE	% OUTSIDE AIR
RTU-1	2400 CFM	600 CFM	1800 CFM	---	+ 600 CFM	25
RTU-2	2400 CFM	600 CFM	1800 CFM	---	+ 600 CFM	25
RTU-3	3400 CFM	850 CFM	2550 CFM	---	+ 850 CFM	25
RTU-4	3400 CFM	850 CFM	2550 CFM	---	+ 850 CFM	25
MAU-1	---	2800 CFM	---	---	+ 2800 CFM	100
EF-1	---	---	---	2300 CFM	- 2300 CFM	---
EF-2	---	---	---	2300 CFM	- 2300 CFM	---
EF-3	---	---	---	300 CFM	- 300 CFM	---
EF-4	---	---	---	200 CFM	- 200 CFM	---
EF-5	---	---	---	200 CFM	- 200 CFM	---
EF-6	---	---	---	200 CFM	- 200 CFM	---
TOTAL	11600 CFM	5700 CFM	8700 CFM	5500 CFM	+ 200 CFM	25

AIR DEVICE SCHEDULE

SYM.	SIZE	TYPE	DUCT SIZE	MODEL#	FINISH	BOOT SIZE	OPENING SIZE	#
A*	24X24	SUPPLY 4 WAY	12"∅	NCA12	WHITE	12"∅	T-BAR	5
A2*	24X24	SUPPLY 2 WAY	12"∅	NCA12-2P	WHITE	12"∅	T-BAR	2
B**	24X24	SUPPLY PERF.	12"∅	APDDR-2222	WHITE	22X22-14"∅	---	5
C***	18X12	SUPPLY SIDEWALL	8"Ø	P620DF-1812	WHITE	12"∅	---	12
D****	60X4	SUPPLY SLOT	8"∅	****	WHITE	---	V.I.F.	4
E*****	12X12	SUPPLY 1 WAY	6"∅	630	WHITE	12X12	SIZE + 1/4"	1
F*****	12X12	SUPPLY 1 WAY	6"∅	630	WHITE	12X12	SIZE + 1/4"	3
G	12X12	CEILING TRANSFER		630TB	WHITE	6"∅	---	2
G1	12X12	WALL TRANSFER		DG	WHITE	6"∅	---	2
H	24X24	RETURN	18"∅	630TB	WHITE	22X22	T-BAR	4
J	12X12 24X24	EXHAUST	8"∅	630	WHITE	12X12 24X24	SIZE + 1/4"	2

ALL DEVICES MANUFACTURED BY METALAIRE OR EQUIVALENT AND 100% ALUMINUM CONSTRUCTION
* PROVIDE WITH PVCR9 SLIDING-BLADE DAMPER AND 1 24X24 LAY-IN FRAME FOR 'A2'
** PROVIDE WITH FIVE 14"∅-TO-12"∅ REDUCERS FOR TOPS OF DIFFUSERS
*** PROVIDE WITH OPPOSED-BLADE DAMPER AND DUAL DEFLECTION BLADES
**** MATCH TITUS FT10, SURFACE MOUNT WITH 8"∅ INTAKE
***** PROVIDE WITH OPPOSED-BLADE DAMPER



DUCT SCHEDULE	
SIZE	GAUGE
6"∅ - 8"∅	28
10"∅ - 12"∅	26
14"∅ - 16"∅	24
18"∅ - 20"∅	22

DUCT SUPPORT
SUPPORT DUCTWORK WITH 1-1/2" WIDE 22 GAUGE STEEL STRAPS FIRMLY ATTACHED TO THE BUILDING STRUCTURE. SPACING SHALL BE MAXIMUM 10-0" FOR RIGID DUCTWORK, AND MINIMUM 4'-0" FOR FLEXIBLE DUCTWORK. 12 GAUGE WIRE MAY BE SUBSTITUTED FOR STRAPS IF 1-1/2" WIDE 22 GAUGE STEEL SADDLES ARE USED TO FULLY ENCIRCLE DUCT. REFER TO THE HVAC DUCT CONSTRUCTION STANDARDS PUBLISHED BY SMACNA FOR ADDITIONAL DETAILS. FULLY COMPLY WITH MECHANICAL CODES.

RIGID/FLEXDUCT CONNECTION/INSTALL DETAIL

NOT TO SCALE

SPACE SIZES - VENT. SCHEDULE

NOT TO SCALE

VENTILATION SCHEDULE

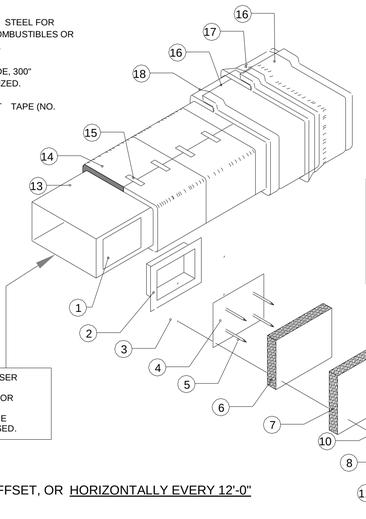
LABEL	AREA	OCCUPANCY RATE*	OCCUPANCY	VENTILATION RATE**	VENT. REQ.**	ADDT'L AREA RATE**	ADDT'L REQ.**
DINING	1500 SF	70 PPL / 1000 SF	105 PPL	7.5 CFM / PPL	788 CFM	0.18 CFM / SF	270 CFM
KITCHEN	1850 SF	20 PPL / 1000 SF	37 PPL	7.5 CFM / PPL	278 CFM	0.12 CFM / SF	222 CFM

NOTE : THE DINING AREA IS 1500 SF. 1500 / 1000 X 70 X 7.5 = 788 CFM. 1500 X 0.18 = 270 CFM.
THE KITCHEN AREA IS 1850 SF. 1850 / 1000 X 20 X 7.5 = 278 CFM. 1850 X 0.12 = 222 CFM.
THE TOTAL VENTILATION REQUIREMENT IS 788 CFM + 270 CFM + 278 CFM + 222 CFM = 1558 CFM. TOTAL CFM OF 5700 IS PROVIDED.
AT ALL OCCUPIED TIMES. SEE AIR BALANCE SCHEDULE TABLE.

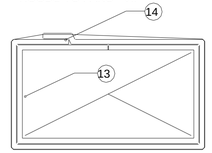
* PER FMC TABLE 403.3
** PER ASHRAE 62.1

LEGEND	
1	DOOR HOLE
2	ACCESS FRAME WELDED TO DUCT
3	1/4" DIA. ALL THREAD RODS
4	ACCESS COVER; 16 GA.
5	INSULATION PINS; WELDED
6	1 3M FIRE BARRIER 615 PLUS
7	1 3M FIRE BARRIER 615 PLUS 1" OVERLAP
8	1 3M FIRE BARRIER 615 PLUS 1" OVERLAP
9	SPEED CLIPS
10	ALUMINUM TAPE EDGES
11	SPOOL PIECES FOR THREADED RODS
12	1/4" DIA. WING NUTS
13	16 GA. SHEET METAL DUCT (FULLY WELDED WATER TIGHT)
14	1ST LAYER 3M FIRE BARRIER DUCT WRAP 615 PLUS LONGITUDINAL JOINT BUTT OR MIN. 3" OVERLAP ON INNER LAYER, MIN. 3" OVERLAP ON OUTER LAYER
15	3/4" (19mm) WIDE FILAMENT TAPE
16	2ND LAYER 3M FIRE BARRIER DUCT WRAP 615 PLUS OR APPROVED EQUIVALENT
17	3" MINIMUM PERIMETER OVERLAP - TYP.
18	STEEL BANDING 1/2" WIDE MIN. TYP. FOR PERMANENT FASTENING

NOTES:
1. BANDING MATERIAL, 3/4" WIDE, MINIMUM 0.015" THICK, CARBON STEEL FOR CONSTRUCTION REQUIREMENTS OF ZERO CLEARANCE TO COMBUSTIBLES OR 1 HR. RATINGS. STAINLESS STEEL BANDING IS USED FOR 2 HR. REQUIREMENTS.
2. 3M FIRE BARRIER DUCT WRAP 615+, 1-1/2" THICK, 24" OR 48" WIDE, 300" STANDARD LENGTH (2 LAYERS) 6 LBS PER CUBIC FT TO BE UTILIZED.
3. HOLD INTERIOR WRAP OF INSULATION USING 1" WIDE FILAMENT TAPE (NO. 898) MANUFACTURED BY 3M COMPANY.
4. SEAL CUT EDGES OF BLANKET WITH ALUMINUM FOIL TAPE.



INSTALLATION NOTE:
FIRE WRAP SHALL BE USED ON ENTIRETY
OF GREASE EXHAUST RISERS, FROM HOODS TO FANS - VIF



PLAN VIEW

FULLY WELDED GREASE RATED EXHAUST DUCT. SEE SIZE ON PLAN. RISER SHALL BE LIGHT INSPECTED LAYING ON FLOOR. FULLY PREPARE FOR SCHEDULED INSPECTION. HVAC CONTRACTOR SHALL VERIFY TEST PRIOR TO SCHEDULE. THE USE OF U.L. LISTED PREFABBED DUCT BY CAPTIVE AIRE INSTALLED CORRECTLY MAY BE EXEMPT FROM LIGHT INSPECTION IF USED.

NOTE: ACCESS DOOR NOT REQUIRED UNLESS OFFSET, OR HORIZONTALLY EVERY 12'-0"

1 HR. FIRE WRAP ("0" CLEARANCE) TO COMUSTIBLES - INSTALLATION DETAIL

NOT TO SCALE

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10. EXHAUST DUCT TO BE PROTECTED FROM COMBUSTIBLES PER NFPA96 AND LOCAL CODE.
11. BUILDING PRESSURE SHALL NOT EXCEED 0.02" WATER COLUMN AT EXTERIOR DOORS.
12. KITCHEN SHALL BE BALANCED TO BE NEGATIVE WITH RESPECT TO THE DINING ROOM.

(MINIMUM) HEX NUTS AS S[illegible] 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.

SECTION VIEW - MODEL 6024ND-2
HOOD - #1 (Fryers)

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FIRE SYSTEM INFORMATION – JOB#5446813

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0/4.0	44	FIRE CABINET LEFT	LEFT, HOOD 1

VERIFY GAS VALVE SIZE REQUIRED

0.75"___1.0"___1.25"___1.5"___1.75"___2.0"

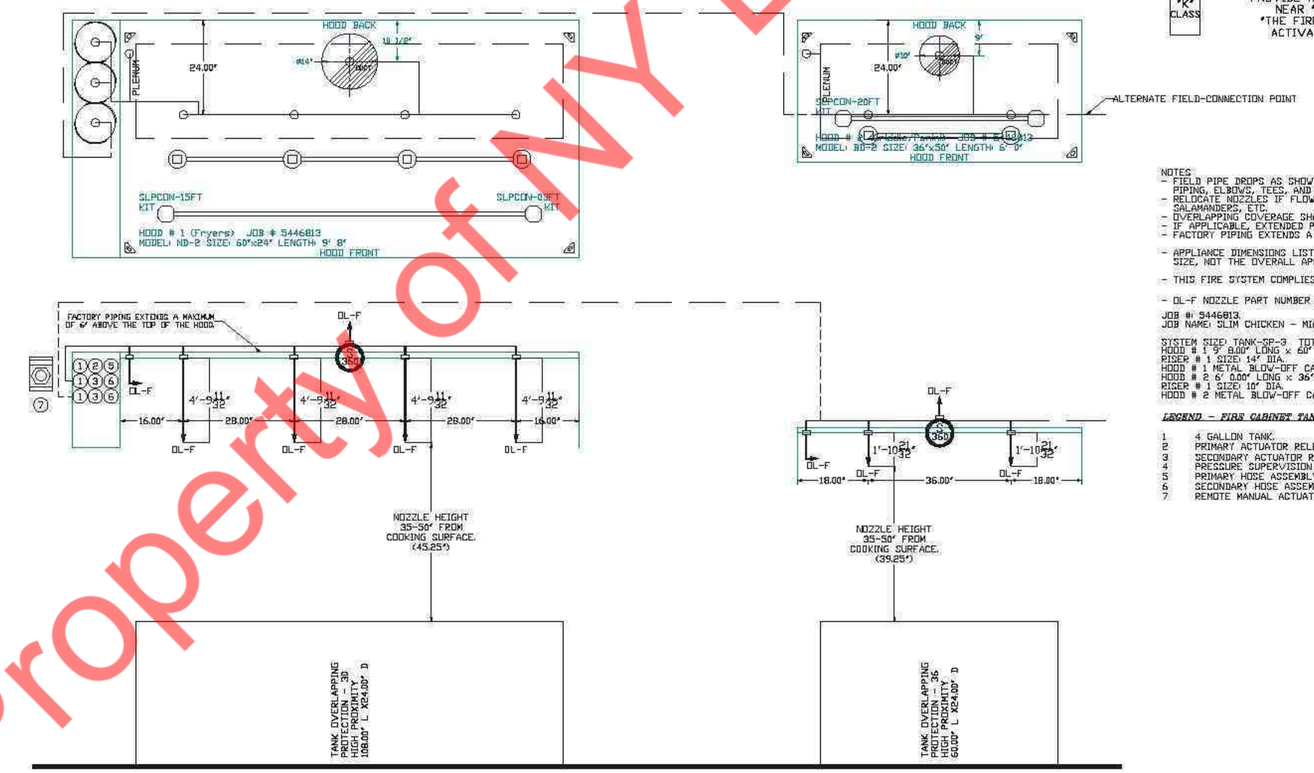
FIRE SUPPRESSION GAS SHUT OFF VALVE SIZE NEEDED

FE_K BY OTHERS

K-CLASS EXTINGUISHER MAXIMUM 30 FEET FROM HOOD

"K" CLASS

PROVIDE A PLACARD CONSPICUOUSLY PLACED NEAR "K" CLASS FIRE EXTINGUISHER. "THE FIRE PROTECTION SYSTEM SHALL BE ACTIVATED PRIOR TO USING THE FIRE EXTINGUISHER"



NOTES

- FIELD PIPE DROPS AS SHOWN.
- PIPING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS.
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVING, SALAMANDERS, ETC.
- OVERLAPPING COVERAGE SHALL NOT BE USED ON ANY APPLIANCE WITH AN OBSTRUCTION.
- IF APPLICABLE, EXTENDED PRE-PIPED DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

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

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

- OL-F NOZZLE PART NUMBER REPLACES 3070-3/8H-10-SS

JOB #: 5446813
JOB NAME: SLIM CHICKEN – MIAMI GARDENS, FL.

SYSTEM SIZE: TANK-SF-3 TOTAL FP REQUIRED: 44.
HOOD # 1: 5' 0.00" LONG x 60" WIDE x 84" HIGH.
RISER # 1 SIZE: 1¼" DIA.
HOOD # 1 METAL BLOW-OFF CAPS INCLUDED.
HOOD # 2: 6' 0.00" LONG x 36" WIDE x 50" HIGH.
RISER # 1 SIZE: 1" DIA.
HOOD # 2 METAL BLOW-OFF CAPS INCLUDED.

LEGEND – FIRE CABINET TANK SYSTEM

1. 4 GALLON TANK.
2. PRIMARY ACTUATOR RELEASE.
3. SECONDARY ACTUATOR RELEASE.
4. PRESSURE SUPERVISION SWITCH.
5. PRIMARY HOSE ASSEMBLY.
6. SECONDARY HOSE ASSEMBLY.
7. REMOTE MANUAL ACTUATION DEVICE.

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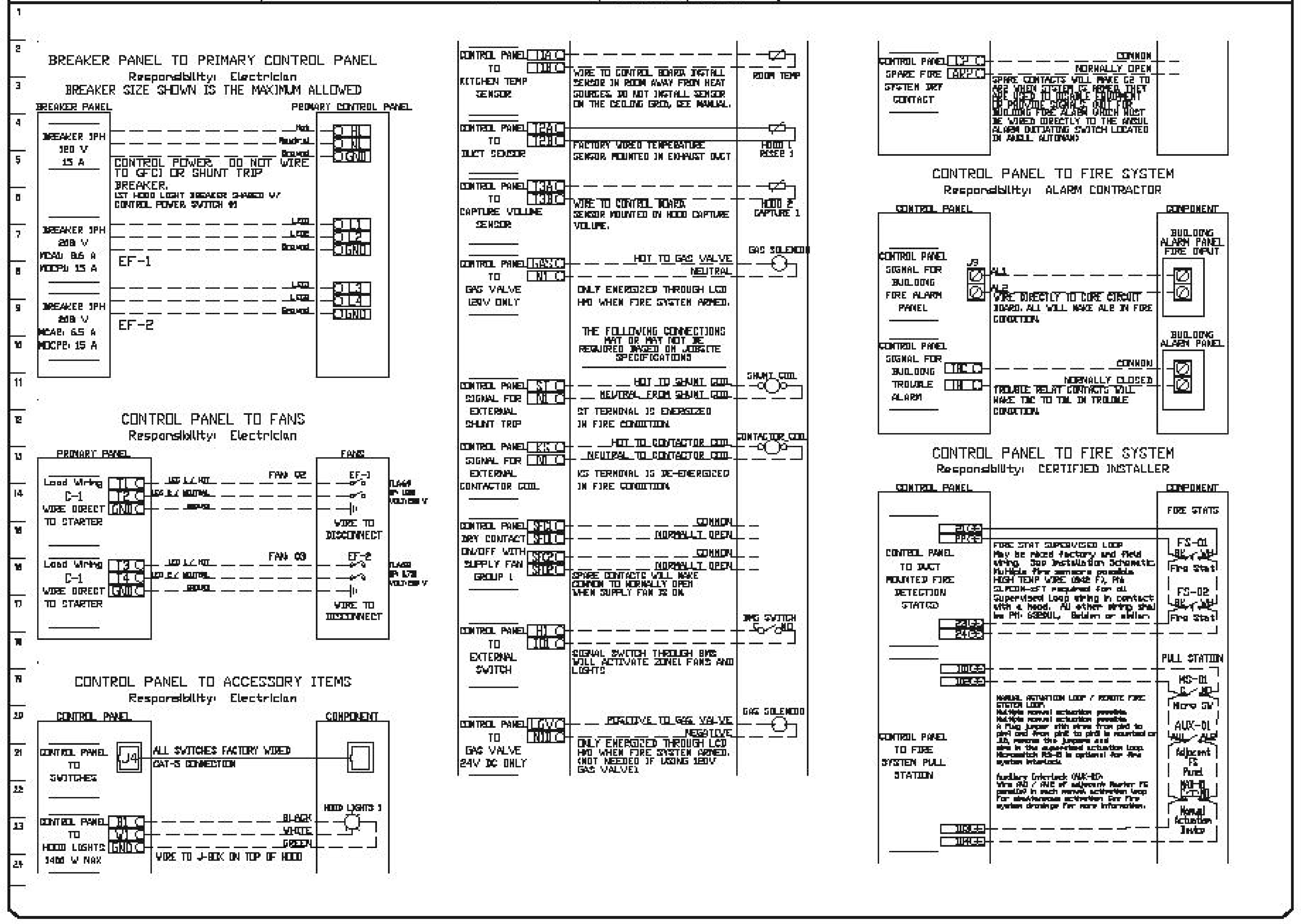
JOB NO 5446813 | MODEL NUMBER SC-220110MA | JOB NAME Slim Chicken - Nlani Gardens... | DATE 4/27/2022 | SCHEMATIC TYPE INSTALL | DWG NO ECP H1-1

DESCRIPTION OF OPERATION:



ELECTRICAL PACKAGE – JOB#5446813

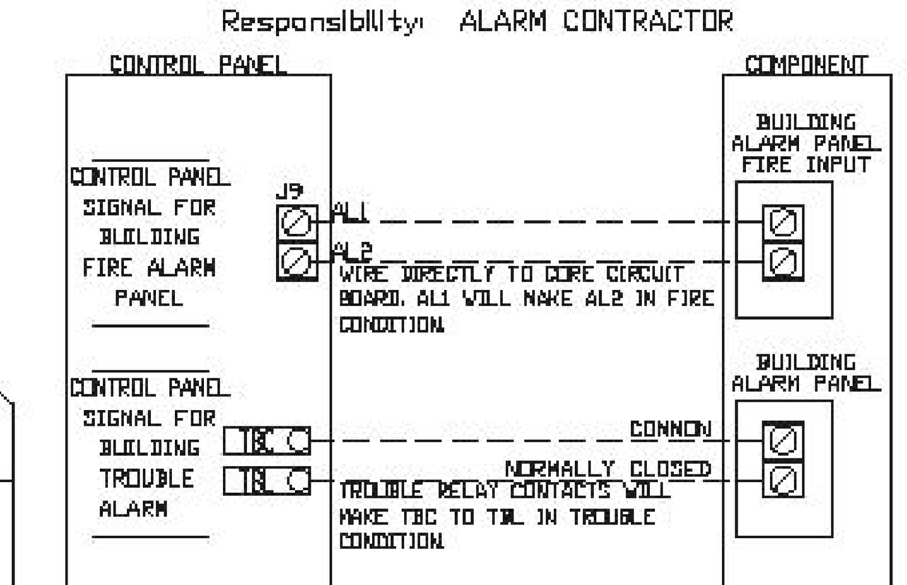
NO	TAG	PACKAGE #	LOCATION	SWITCHES LOCATION	SWITCHES QUANTITY	OPTION	FAN TAG	TYPE	#	HP	VOLT	FLA
1		SC-220110MA	UTILITY CABINET LEFT	#1 - UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	EF-1	EXHAUST	1	1.000	208	6.9
				HOOD # 1	1 FAN		EF-2	EXHAUST	1	0.750	208	5.2

NOTE:
THIS HOOD SYSTEM HAS A HEAT SENSOR THAT COMPLIES WITH IMC 507.2.1.1 FOR AUTOMATIC FAN ACTIVATION WHENEVER COOKING OPERATIONS OCCUR.

FOR TECHNICAL SUPPORT OR QUESTIONS ON WIRING/CONTROLS
CALL: 1-866-784-6900

ACTUAL FIRE SYSTEM PIPING SCHEMATIC TO BE PROVIDED BY CONTRACTED FIRE SYSTEM DISTRIBUTOR AT TIME OF PERMITTING

CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR



JOB NO 5446813 | MODEL NUMBER SC-220110MA | JOB NAME Slim Chicken - Nlani Gardens... | DATE 4/27/2022 | SCHEMATIC TYPE INSTALL | DWG NO ECP H1-3

DESCRIPTION OF OPERATION:

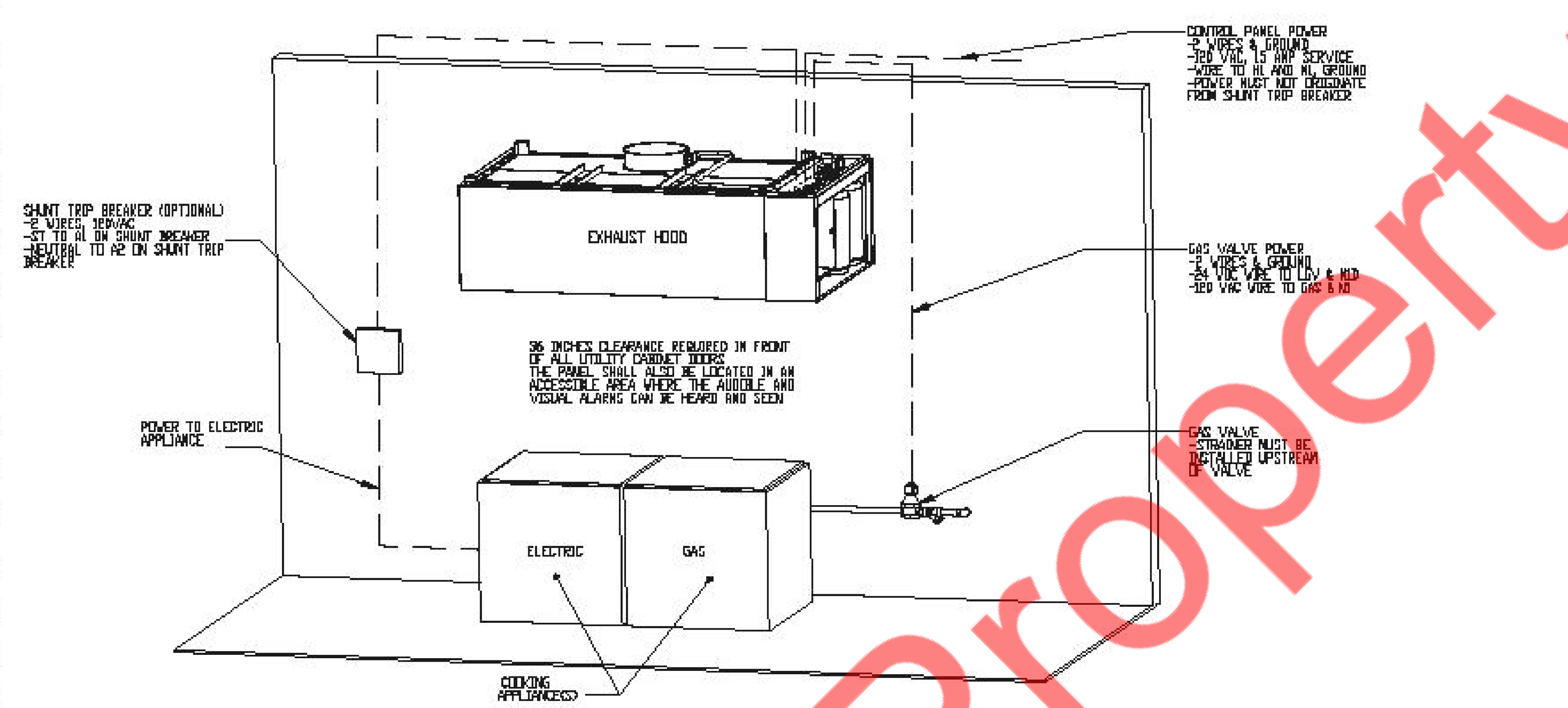
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N10 (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N10 TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO 5446813 | MODEL NUMBER SC-220110MA | JOB NAME Slim Chicken - Nlani Gardens... | DATE 4/27/2022 | SCHEMATIC TYPE INSTALL | DWG NO ECP H1-4

DESCRIPTION OF OPERATION:

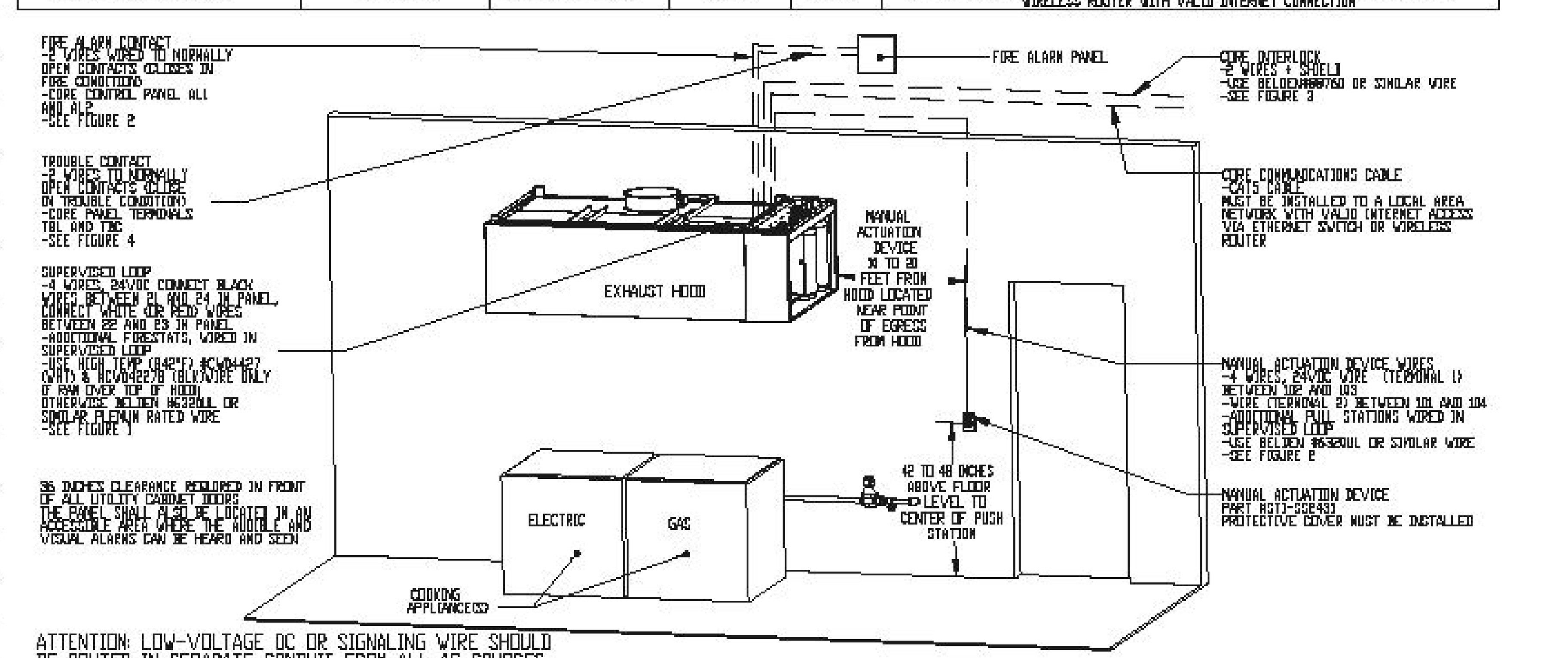
TANK PROTECTION LOW-VOLTAGE DETAIL

02/10/2021 Rev. 2

FS-1: MASTER

ALARM CONTRACTOR
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-6530B
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (842°F) #CWB4427 (WHT) & #CWB4427B (BLK)WIRE OR SIMILAR ONLY IF RAN OVER TOP OF HOOD; OTHERWISE BELDEN #83201 OR SIMILAR PLENUM RATED WIRE; SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	ILA, ILB, ILC	ILA, ILB, ILC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) ILA, TO CORE SYSTEM (2) ILA, CORE SYSTEM (1) ILB, TO CORE SYSTEM (2) ILB, CORE SYSTEM (1) ILC, TO CORE SYSTEM (2) ILC. USE BELDEN# 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TBK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	0.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ELECTRICIAN NOTES:

All Hood/Fan/EMS/UDS/PCU electrical connections and interconnections to be provided and installed by Electrician. Electrician to provide, install, and land wiring between hood lights, hood temp sensors, remote Ansul system microswitches, and any other component requiring an electrical connection to the Captive-Aire electrical package. Failure by the Electrician to make ALL required electrical connections and interconnections will result in the electrical controls not working properly. Any loss or failed test as a result of electrical controls not working properly is the responsibility of the Electrician. Light bulbs for kitchen hoods to be provided and installed by electrician.

GENERAL NOTES:

1. ELECTRICAL HOOK-UP TO CAS MOTOR CONTROLS (MOTOR STARTERS, FAN SWITCHES, FAN DISCONNECTS, RELAYS, ETC.) BY OTHERS.
2. FIRE CHASE BY OTHERS, IF REQUIRED.
3. ALL PHASES OF INSTALLATION SHALL COMPLY WITH NFPA 96.
4. WRITTEN MEASUREMENTS HAVE PRECEDENCE OVER SCALE.
5. PROVIDE CLEANOUTS IN EXHAUST AIR DUCTS AS INDICATED TO ALLOW CLEANING AT ALL BENDS AND HORIZONTAL RUNS.
6. UNLISTED EXHAUST DUCT TO BE 16 GA. GAV STEEL ALL SEAMS AND JOINTS TO HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WELD.
7. FAN TO HAVE A MINIMUM OF 10 FT. OF CLEARANCE FROM THE OUTLET TO ADJACENT BUILDINGS, PROPERTY LINES, AIR INTAKES OR 3 FT. VERTICAL CLEARANCE PER NFPA96
8. HORIZONTAL EXHAUST DUCT TO SLOPE NOT LESS THAN 1/4" PER FOOT TOWARD HOOD FOR DUCT LESS THAN 75' LONG. 1" PER FOOT SLOPE FOR DUCT LONGER THAN 75'
9. HOOD TO OVERHANG COOKING EQUIPMENT 6" ON ALL OPEN SIDES.
10. EXHAUST DUCT TO BE PROTECTED FROM COMBUSTIBLES PER NFPA96 AND LOCAL CODE.
11. BUILDING PRESSURE SHALL NOT EXCEED 0.02" WATER COLUMN AT EXTERIOR DOORS.
12. KITCHEN SHALL BE BALANCED TO BE NEGATIVE WITH RESPECT TO THE DINING ROOM.

EXHAUST FAN INFORMATION – JOB#6455485

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU180HFA	CAPTIVEAIRE	2300	1.250	1125	ODP,PREMIUM	1.500	0.9930	3	208	6.6	531 FPM	183	12.8
2	KEF-2	1	DU180HFA	CAPTIVEAIRE	2300	1.250	1125	ODP,PREMIUM	1.500	0.9930	3	208	6.6	531 FPM	183	12.8
4	EF-3	1	DR10HFA	CAPTIVEAIRE	300	0.250	1389	TEAO-ECM	0.166	0.0530	1	115	1.9		32	4.8
5	EF-4	1	DU10HFA	CAPTIVEAIRE	200	0.250	1190	TEAO-ECM	0.166	0.0180	1	115	1.9	417 FPM	50	3.8
6	EF-5	1	DU10HFA	CAPTIVEAIRE	200	0.250	1190	TEAO-ECM	0.166	0.0180	1	115	1.9	417 FPM	50	3.8
7	EF-6	1	DU10HFA	CAPTIVEAIRE	250	0.250	1302	TEAO-ECM	0.166	0.0250	1	115	1.9	521 FPM	50	4.9

CONDENSER DETAILS

FAN UNIT NO	TAG	FAN UNIT MODEL #	CONDENSER NO	TONNAGE	VOLTAGE	PHASE	FREQUENCY	MCA	RLA	MAX FUSE SIZE	MIN WIRE SIZE	SEER
3	MAU-1	A2-20D-MPU	1	5	208-230	3 PHASE	60 HZ	21.5 AMPS	15.96 AMPS	30 AMPS	10 AWG	14

MUA FAN INFORMATION – JOB#6455485

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
3	MAU-1	1	A2-20D-MPU	20MF-2-MOD	A2	2000	2800	0.900	1282	ODP,PREMIUM	2.000	1.1220	3	208	6.1	7.7A	15A	1214	14.2

COILS – JOB#6455485

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING												HEATING								
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY		ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
3	MAU-1	DX	2800	93.0°F	77.0°F	81.0°F	71.5°F	---	---	---	---	60.0 MBH	35.2 MBH	24.8 MBH		---	---	---	---	---	---	---	---	---

FAN UNIT NO	TAG	FAN UNIT MODEL #	HEATING MODE ENTERING DB TEMP	HEATING MODE TEMP RISE	HEATING MODE DISCHARGE DB TEMP
3	MAU-1	A2-20D-MPU	31.0°F	12.0°F	43.0°F

FAN OPTIONS

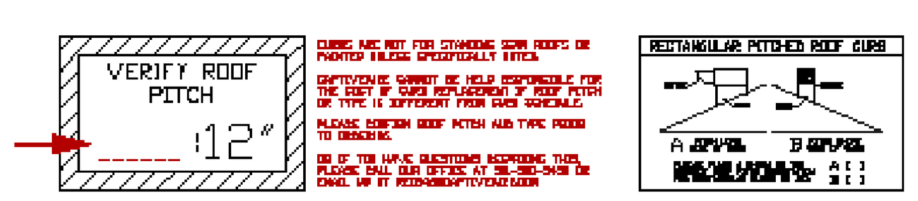
FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	EXHAUST FAN HEAT BAFFLE
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	2 YEAR PARTS WARRANTY
2	KEF-2	1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	EXHAUST FAN HEAT BAFFLE
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	2 YEAR PARTS WARRANTY
3	MAU-1	1	SIZE 2 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	5 TON SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION WITH HEAT PUMP FOR SIZE 2 MUA (2,000 TO 3,000 CFM), 208V/230V, 3 PHASE
		1	INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL
		1	MOD PACKAGE UNIT HEAT PUMP CONTROLS FOR UNTEMPERED FANS
		1	GRAVITY BACKDRAFT DAMPER FOR SIZE 2 HOUSING
		1	MIAMI DADE CERTIFICATION - NOA-2 SUPPLY
		1	MIXING BOX SHELL FOR SIZE 2 MOD PACKAGE UNIT CONDENSER SUPPORT
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	UNIT MOUNTED VFD FOR USE WITH ECPM03
		1	2 YEAR PARTS WARRANTY
4	EF-3	1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	I 12-BDD DAMPER
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM DOWNBLAST 9
		1	2 YEAR PARTS WARRANTY
5	EF-4	1	SCR-10 BIRD SCREEN
		1	I 12-BDD DAMPER
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
6	EF-5	1	SCR-10 BIRD SCREEN
		1	I 12-BDD DAMPER
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
7	EF-6	1	SCR-10 BIRD SCREEN
		1	I 12-BDD DAMPER
		1	MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES						
2	KEF-2	YES						
3	MAU-1					YES		
4	EF-3		YES					
5	EF-4		YES					
6	EF-5		YES					
7	EF-6		YES					

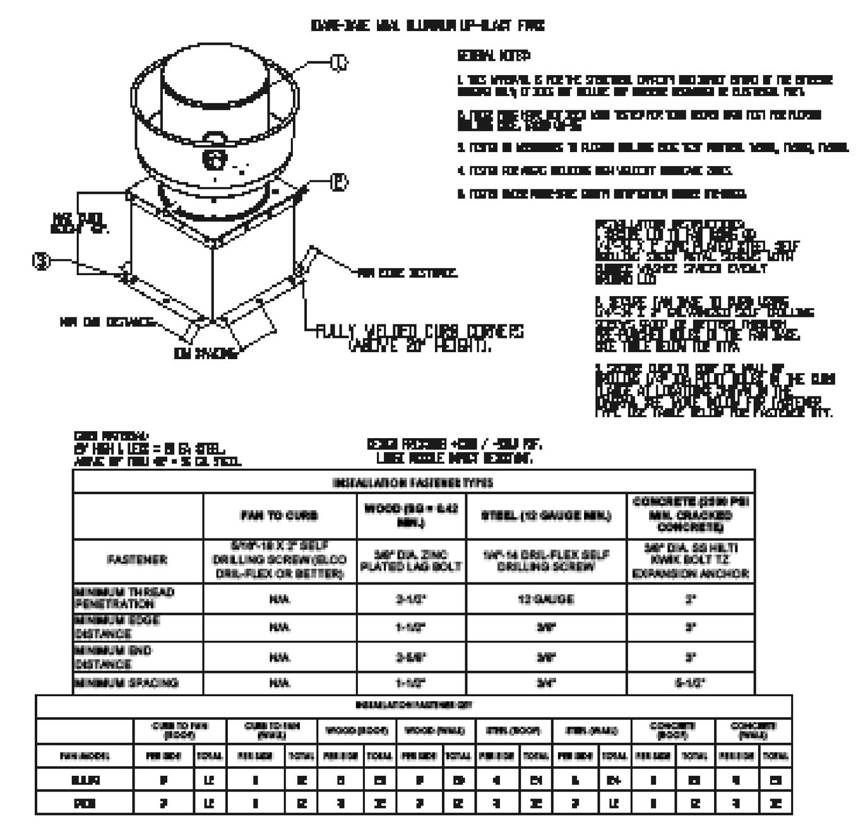
CURB ASSEMBLIES

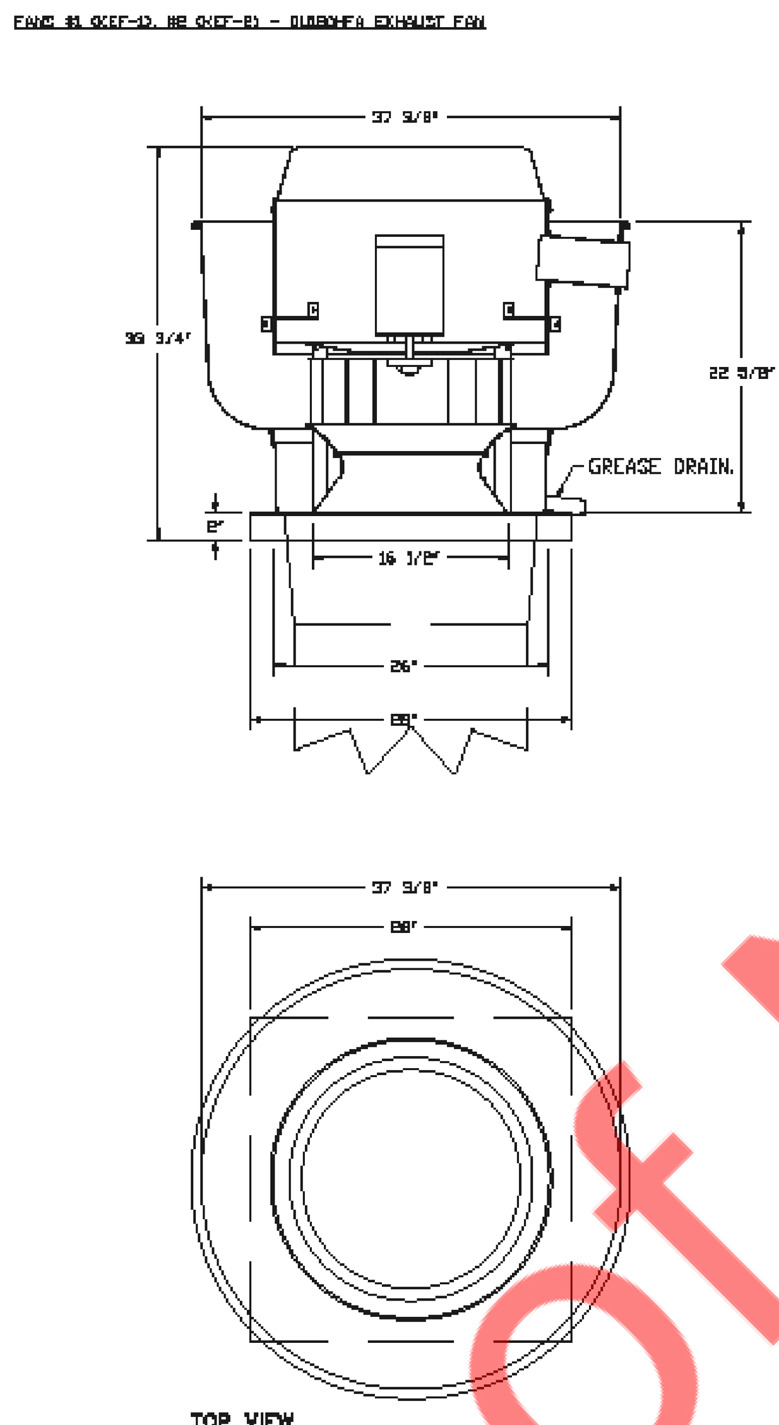
NO	ON FAN	TAG	WEIGHT	ITEM	SIZE
1	# 1	KEF-1	68 LBS	CURB	26.500"W X 26.500"L X 20.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT VENTED HINGED 16 GAUGE.
2	# 2	KEF-2	68 LBS	CURB	26.500"W X 26.500"L X 20.000"H 0.250:12.000 PITCH VENTED HINGED 16 GAUGE.
3	# 3	MAU-1	83 LBS	CURB	31.000"W X 121.000"L X 14.000"H 0.250:12.000 PITCH ALONG WIDTH, RIGHT INSULATED MPU CURB CLIPS.
4	# 4	EF-3	22 LBS	CURB	17.500"W X 17.500"L X 16.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT INSULATED.
5	# 5	EF-4	16 LBS	CURB	17.500"W X 17.500"L X 12.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT INSULATED.
6	# 6	EF-5	16 LBS	CURB	17.500"W X 17.500"L X 12.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT INSULATED.
7	# 7	EF-6	16 LBS	CURB	17.500"W X 17.500"L X 12.000"H 0.250:12.000 PITCH ALONG LENGTH, RIGHT INSULATED.

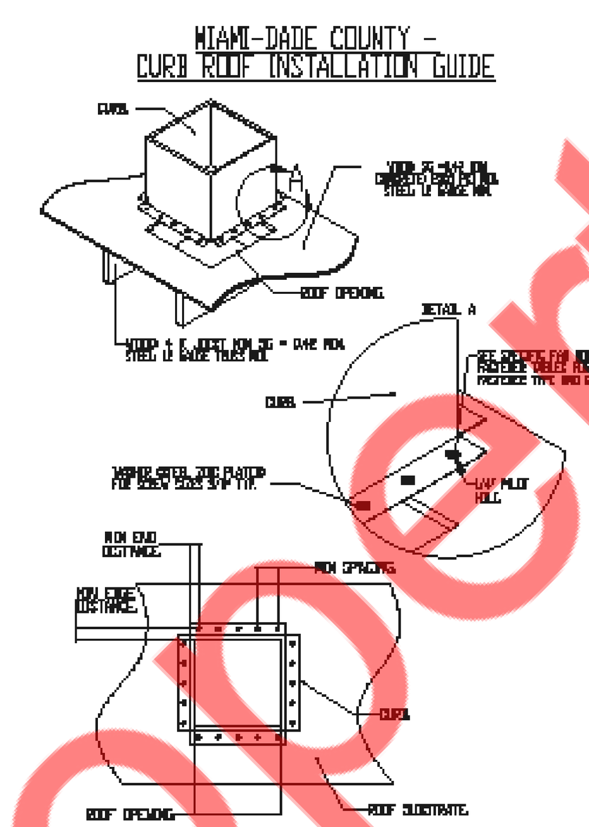


CUSTOMER APPROVAL TO MANUFACTURE: THIS BLOCK MUST BE COMPLETED BEFORE JOB WILL BE PUT INTO PRODUCTION

APPROVED AS DRAWN ☐	APPROVED AS NOTED ☐	REVISE & RESUBMIT ☐	SIGNATURE ______ DATE ______







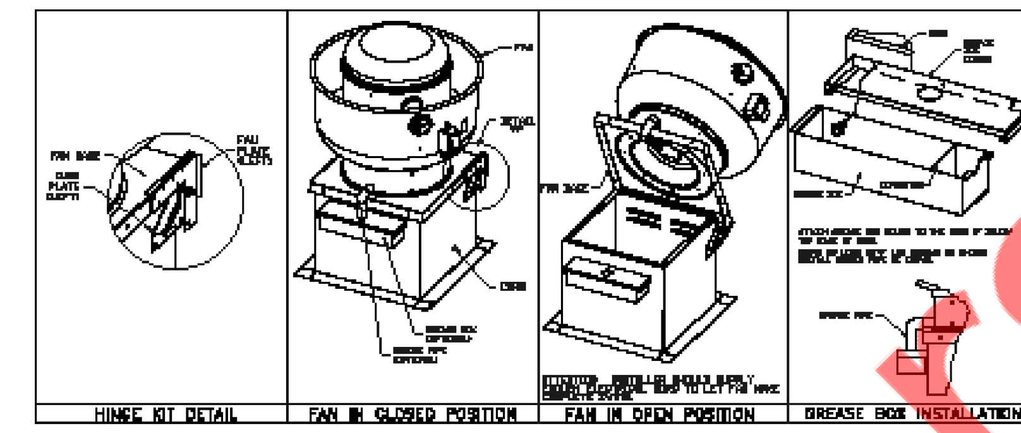
FEATURES:

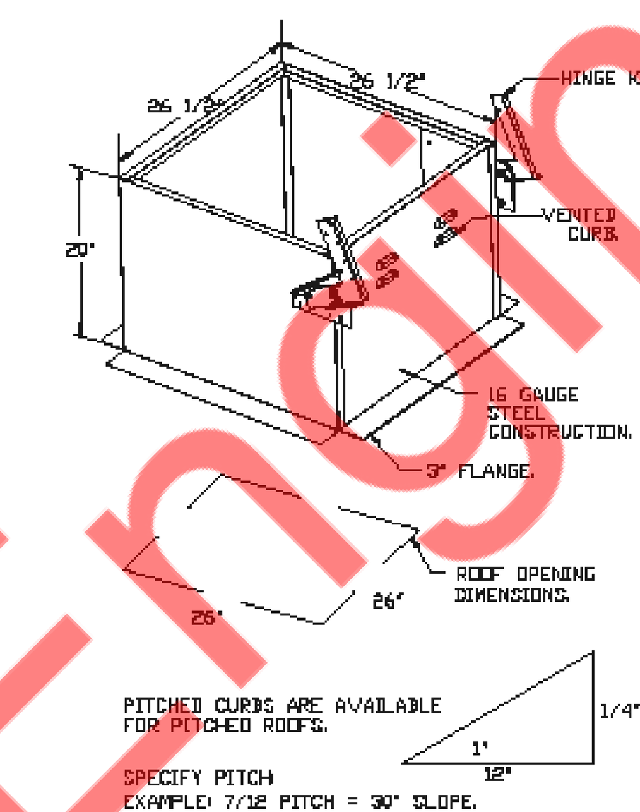
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

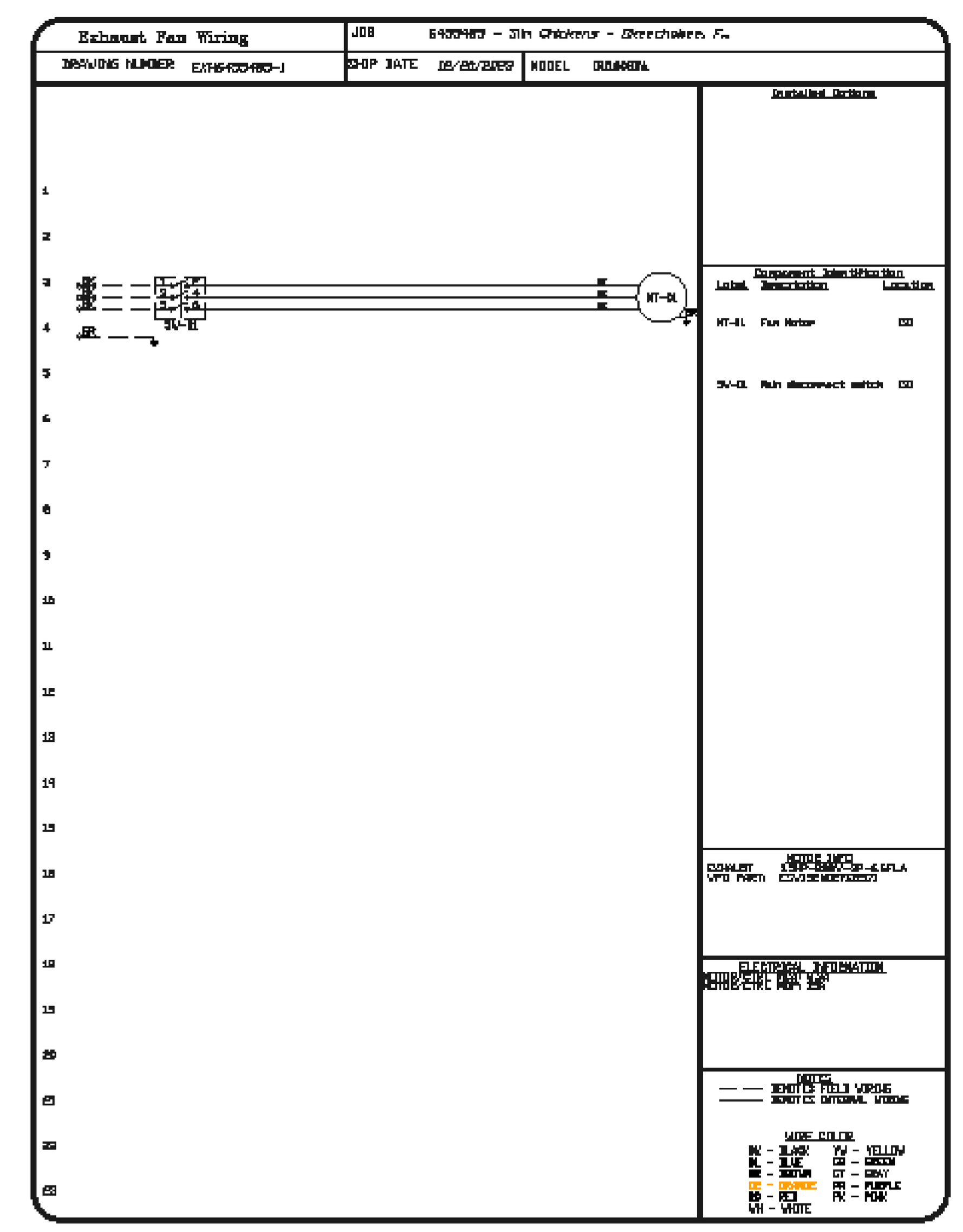
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

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

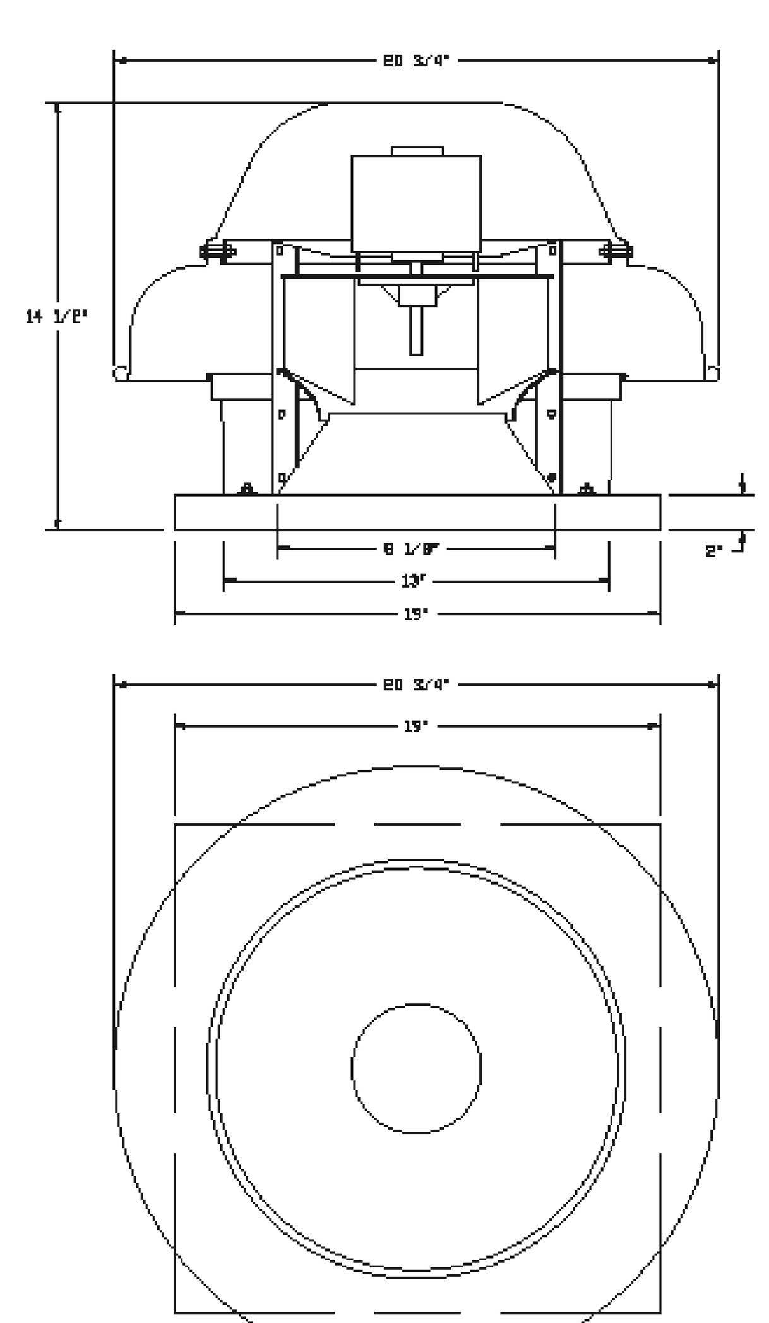
OPTIONS
- GREASE BOX.
- FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
- EXHAUST FAN HEAT BAFFLE.
- MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST.
- 2 YEAR PARTS WARRANTY.







FAN #4 SUSHIFA - EXHAUST FAN (EF-3)

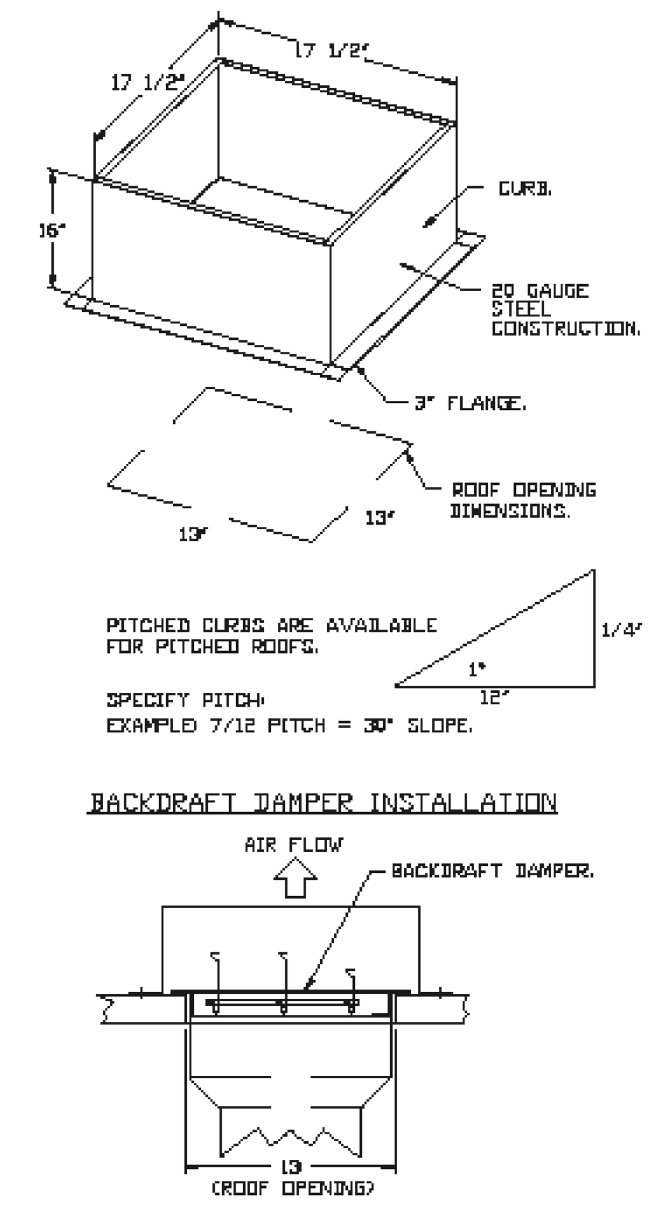


FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- SAFETY DISCONNECT.
- STANDARD BIRD SCREEN.
- SPEED CONTROL.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

OPTIONS:

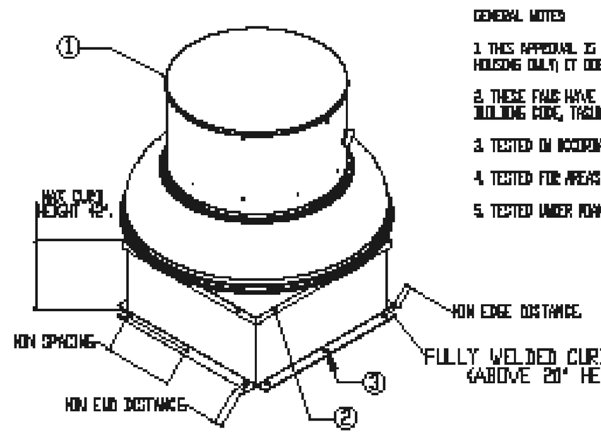
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION.
- 1 12-BDD DAMPER.
- MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM DOWNBLAST 9.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

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

MIAMI-DADE NOA1 ALUMINUM DOWN-BLAST FANS



GENERAL NOTES

1. THIS APPROVAL IS FOR THE STRUCTURAL CAPACITY AND IMPACT RATING OF THE EXTERIOR HOUSING ONLY; IT DOES NOT INCLUDE ANY INTERIOR MECHANISM OR ELECTRICAL PART.
2. THESE FANS HAVE NOT BEEN WIND TESTED FOR WIND DRIVEN RAIN TEST PER FLORIDA BUILDING CODE, TAS100 (A)-95.
3. TESTED IN ACCORDANCE TO FLORIDA BUILDING CODE TEST PROTOCOL TAS201, TAS202, TAS203.
4. TESTED FOR AREAS INCLUDING HIGH VELOCITY HURRICANE ZONES.
5. TESTED UNDER MIAMI-DADE COUNTY NOTIFICATION NUMBER [illegible].

INSTALLATION INSTRUCTIONS:
1. SECURE LID TO FAN USING (8) 1/4"-14 X 1" ZINC PLATED STEEL SELF DRILLING SHEET METAL SCREWS WITH RUBBER WASHER SPACED EVENLY AROUND LID.
2. SECURE FAN BASE TO CURB USING 1/4"-14 X 2" GALVANIZED SELF DRILLING SCREWS (J307 OR BETTER) THROUGH PRE-PUNCHED HOLES IN THE FAN BASE. (SEE TABLE BELOW FOR QTY.)
3. SECURE CURB TO ROOF OR WALL BY DRILLING 1/4" DIA. PILOT HOLES IN THE CURB FLANGE AT LOCATIONS SHOWN IN THE DIAGRAM. SEE TABLE BELOW FOR FASTENER TYPE. USE TABLE BELOW FOR FASTENER QTY.

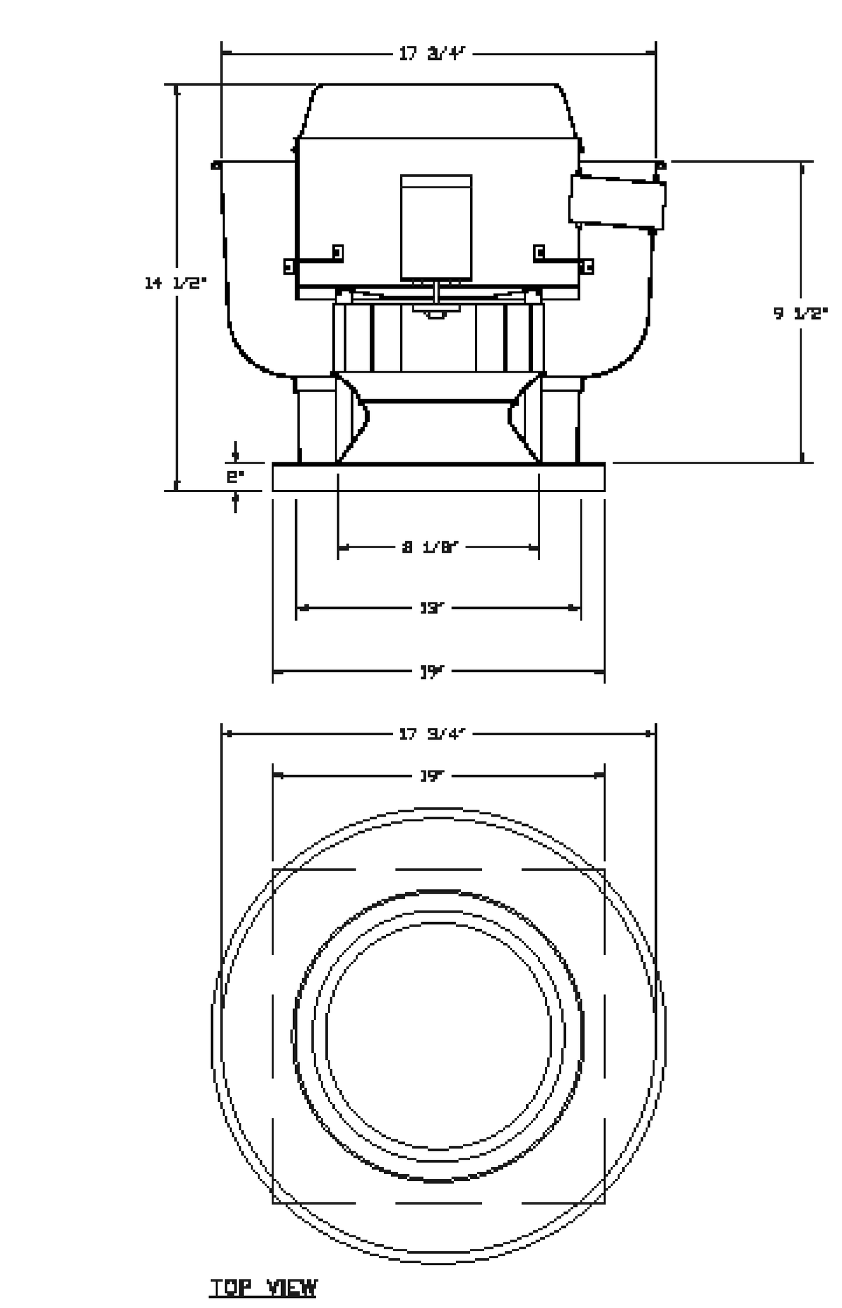
CURB MATERIAL:
30" HIGH & LESS = 18 GA. STEEL.
ABOVE 30" THRU 42" = 16 GA. STEEL.

DESIGN PRESSURE +[illegible] / -[illegible] PSF.
LARGE MISSILE IMPACT RESISTANT.

INSTALLATION FASTENER TYPES				
	FAN TO CURB	WOOD (SG = 0.42 MIN.)	STEEL (12 GAUGE MIN.)	CONCRETE (2500 PSI MIN. CRACKED CONCRETE)
FASTENER	5/16"-18 X 2" SELF DRILLING SCREW (ELCO DRIL-FLEX OR BETTER)	3/8" DIA. ZINC PLATED LAG BOLT	1/4"-14 DRIL-FLEX SELF DRILLING SCREW	3/8" DIA. SS HILTI KWIK BOLT TZ EXPANSION ANCHOR
MINIMUM THREAD PENETRATION	N/A	2-1/2"	12 GAUGE	2"
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"
MINIMUM END DISTANCE	N/A	2-5/8"	3/8"	3"
MINIMUM SPACING	N/A	1-1/2"	3/4"	5-1/2"

INSTALLATION FASTENER QTY																
	CURB TO FAN (ROOF)		CURB TO FAN (WALL)		WOOD (ROOF)		WOOD (WALL)		STEEL (ROOF)		STEEL (WALL)		CONCRETE (ROOF)		CONCRETE (WALL)	
FAN MODEL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL
[illegible]	3	[illegible]	3	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]	5	[illegible]	3	[illegible]

FANS #5 (EF-4), #6 (EF-5), #7 (EF-6) - SUSHIFA EXHAUST FAN

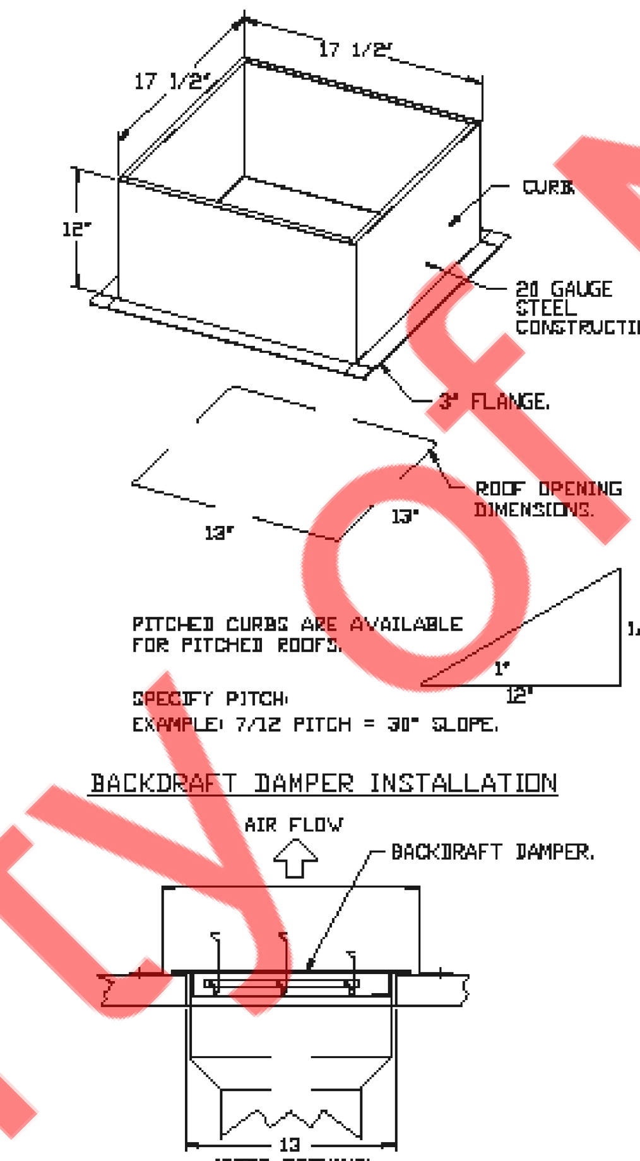


FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- UL705.
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).

OPTIONS:

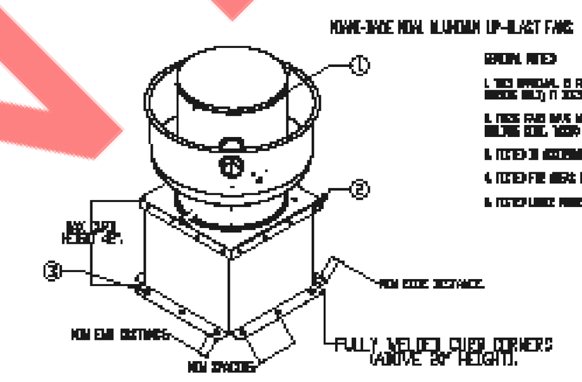
- SCR-10 BIRD SCREEN.
- I 12-BDD DAMPER.
- MIAMI DADE CERTIFICATION - NOA-1 ALUMINUM UPBLAST.
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

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

MIAMI-DADE NOA1 ALUMINUM UP-BLAST FANS



INSTALLATION FASTENER TYPES				
	FAN TO CURB	WOOD (SG = 0.42 MIN.)	STEEL (12 GAUGE MIN.)	CONCRETE (2500 PSI MIN. CRACKED CONCRETE)
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MINIMUM THREAD PENETRATION	N/A	2-1/2"	12 GAUGE	2"
MINIMUM EDGE DISTANCE	N/A	1-1/2"	3/8"	3"
MINIMUM END DISTANCE	N/A	2-5/8"	3/8"	3"
MINIMUM SPACING	N/A	1-1/2"	3/4"	5-1/2"

INSTALLATION FASTENER QTY																
	CURB TO FAN (ROOF)		CURB TO FAN (WALL)		WOOD (ROOF)		WOOD (WALL)		STEEL (ROOF)		STEEL (WALL)		CONCRETE (ROOF)		CONCRETE (WALL)	
FAN MODEL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL	PER SIDE	TOTAL
[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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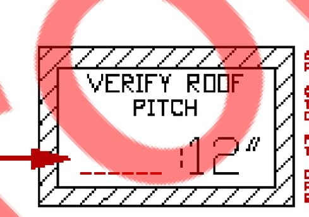
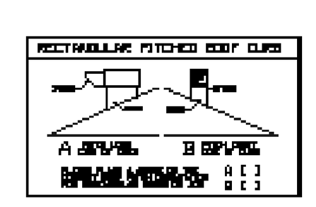




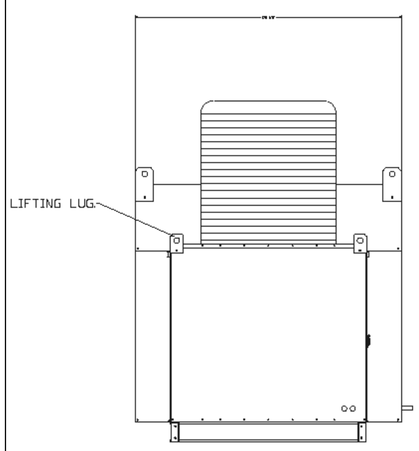
CUSTOMER APPROVAL TO MANUFACTURE: THIS BLOCK MUST BE COMPLETED BEFORE JOB WILL BE PUT INTO PRODUCTION

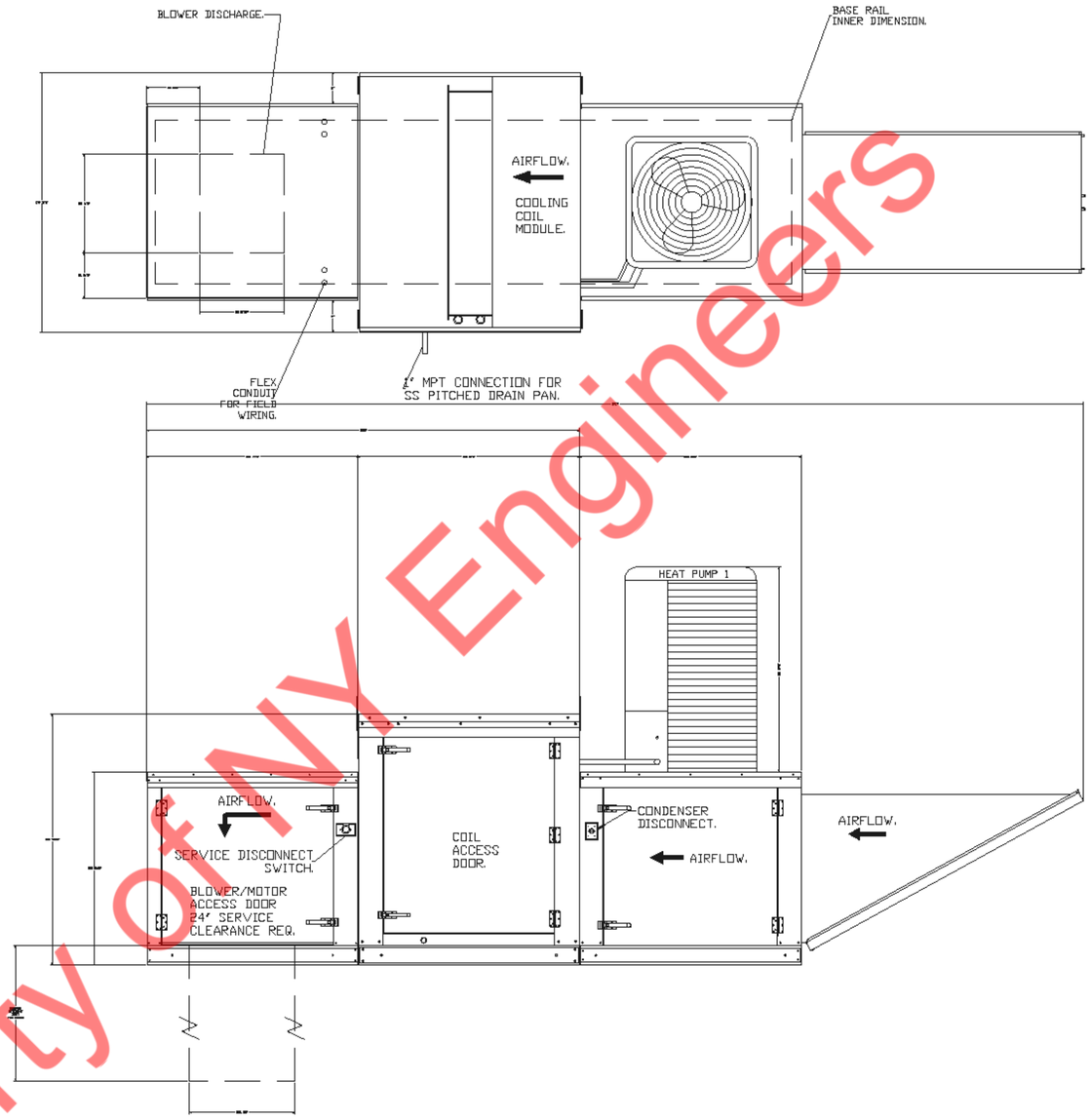
APPROVED AS DRAWN ☐	APPROVED AS NOTED ☐	REVISE & RESUBMIT ☐	SIGNATURE ______ DATE ______

20-12-2023 22:25:10

FAN #3 A2-20D-MPU - SUPPLY FAN (MAU-1)
1. SUPPLY UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN IN SIZE #2 HOUSING.
2. INTAKE HOOD WITH EZ FILTERS.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 2 UNTEMPERED DIRECT DRIVE AHUS.
5. 5 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION WITH HEAT PUMP FOR SIZE 2 MODULAR PACKAGED UNIT. INCLUDES HEAT PUMP, DX COIL, FILTER/DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (2,000 TO 3,000 CFM) WHEN ORDERED WITH OPPOSITE AIRFLOW CONDENSERS ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLI. CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 3E2100IR.
6. INSULATED BLOWER HOUSING SIZES 1-2 COMMERCIAL MODULAR.
7. CONTROL PACKAGE FOR MOD PACKAGE UNIT HEAT PUMP UNIT. INCLUDES AIRFLOW PROVING SWITCH, RTULINK-ACHP BOARD AND TERMINAL BLOCKS.
8. GRAVITY BACK DRAFT DAMPER 22" X 24" , STANDARD GALVANIZED CONSTRUCTION, 1 1/4" REAR FLANGE, FOR SIZE 2 UNTEMPERED FAN HOUSING (5192).
9. MIAMI DADE IMPACT AND WIND LOAD CERTIFICATION +30 / -130 PSF - MIAMI DADE COUNTY PRODUCT CONTROL APPROVED. FLORIDA BUILDING CODE APPROVAL. ROOF MOUNT EXHAUST CURBS UP TO 20" HIGH MUST BE 18 GAUGE ALUMINIZED.
10. SUPPORT SHELL FOR SIZE 2 MODULAR PACKAGE UNIT. INCLUDES CONTROL VESTIBULE. INCLUDES CONDENSER SUPPORTS. DOES NOT INCLUDE RETURN AIR OR INLET AIR DAMPER.
11. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
12. UNIT MOUNTED VFD FOR USE WITH ECPM03.
13. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
14. 2 YEAR PARTS WARRANTY

*(NOTE) SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20" x 20".





COILS - JOB#6112614

FAN UNIT NO	TAG	COIL TYPE	DESIGN CFM	COOLING											HEATING								
				ENTERING DB TEMP	ENTERING WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	TOTAL CAPACITY	SENSIBLE CAPACITY	LATENT CAPACITY	ENTERING DB TEMP	LEAVING DB TEMP	ENTERING FLUID TEMP	LEAVING FLUID TEMP	FLUID FLOW RATE	PERCENT GLYCOL	STEAM PRESSURE	TOTAL CAPACITY	SENSIBLE CAPACITY
3	MAU-1	DX	2800	93.0°F	77.0°F	80.0°F	71.1°F	---	---	---	---	60.0 MBH	35.4 MBH	24.6 MBH	---	---	---	---	---	---	---	---	---

FAN UNIT NO	TAG	FAN UNIT MODEL #	HEATING MODE ENTERING DB TEMP	HEATING MODE TEMP RISE	HEATING MODE DISCHARGE DB TEMP
3	MAU-1	A2-20D-MPU	31.0°F	12.0°F	43.0°F

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Air Handler #1 - AHU-1 - Total Load Summary

Air Handler Description:	AHU-1 Constant Volume - Sum of Peaks
Supply Air Fan:	Draw-Thru with program estimated horsepower of 4.22 HP
Fan Input:	65% motor and fan efficiency with 2.2 in. water across the fan
Sensible Heat Ratio:	0.89 --- This system occurs 1 time(s) in the building. ---
Air System Peak Time:	5pm in August.
Outdoor Conditions:	Clg: 89° DB, 76° WB, 113.91 grains, Htg: 48° DB
Indoor Conditions:	Clg: 75° DB, 50% RH, Htg: 68° DB

Summer: Ventilation controls outside air, ----- Winter: Ventilation controls outside air.

Room Space sensible loss:	16,688	Btuh		
Infiltration sensible loss:	0	Btuh	0	CFM
Outside Air sensible loss:	62,604	Btuh	2,900	CFM
Supply Duct sensible loss:	6,260	Btuh		
Return Duct sensible loss:	0	Btuh		
Return Plenum sensible loss:	0	Btuh		
Total System sensible loss:				85,552 Btuh
Heating Supply Air: 22,948 / (.999 X 1.08 X 7) =			2,900	CFM
Winter Vent Outside Air (100.0% of supply) =			2,900	CFM
Room space sensible gain:	149,835	Btuh		
Infiltration sensible gain:	0	Btuh		
Draw-thru fan sensible gain:	10,708	Btuh		
Supply duct sensible gain:	8,716	Btuh		
Reserve sensible gain:	5,055	Btuh		
Total sensible gain on supply side of coil:				174,315 Btuh
Cooling Supply Air: 174,315 / (.999 X 1.1 X 20) =			7,928	CFM
Summer Vent Outside Air (36.6% of supply) =			2,900	CFM
Return duct sensible gain:	2,764	Btuh		
Return plenum sensible gain:	0	Btuh		
Outside air sensible gain:	44,634	Btuh	2,900	CFM
Blow-thru fan sensible gain:	0	Btuh		
Total sensible gain on return side of coil:				47,398 Btuh
Total sensible gain on air handling system:				221,713 Btuh
Room space latent gain:	21,390	Btuh		
Infiltration latent gain:	0	Btuh		
Outside air latent gain:	98,315	Btuh		
Total latent gain on air handling system:				119,705 Btuh
Total system sensible and latent gain:				341,417 Btuh

Check Figures

Total Air Handler Supply Air (based on a 20° TD):	7,928	CFM
Total Air Handler Vent. Air (36.58% of Supply):	2,900	CFM
Total Conditioned Air Space:	4,000	Sq.ft
Supply Air Per Unit Area:	1.9820	CFM/Sq.ft
Area Per Cooling Capacity:	140.6	Sq.ft/Ton
Cooling Capacity Per Area:	0.0071	Tons/Sq.ft
Heating Capacity Per Area:	21.39	Btuh/Sq.ft
Total Heating Required With Outside Air:	85,552	Btuh
Total Cooling Required With Outside Air:	28.45	Tons

LIGHTING FIXTURE SCHEDULE

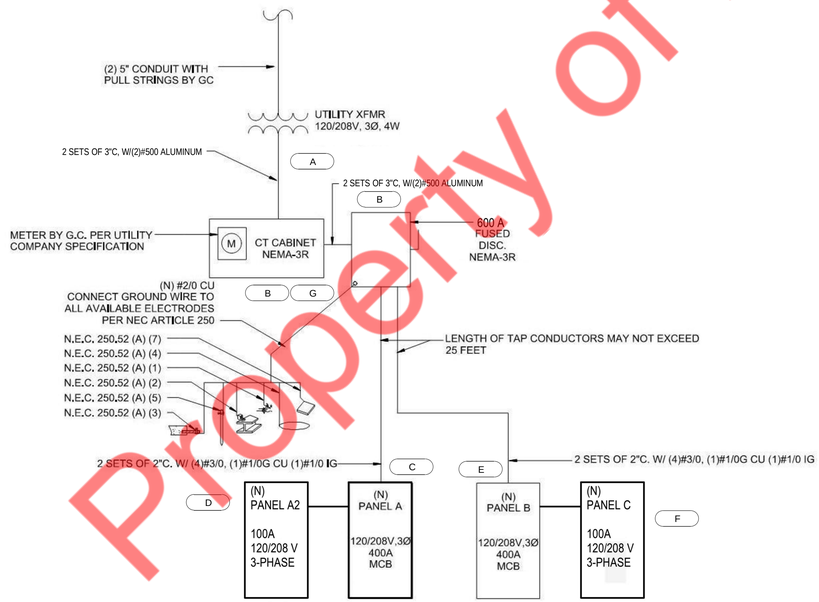
CALLOUT	MANUFACTURER	MODEL	MOUNTING	LAMP	INPUT VA	VOLTAGE	COMMENTS
A	LSI INDUSTRIES, INC.	SLM-LED-24L-SIL-FT-50-70CRI-IL	POLE MOUNTED	LED	189.0 VA	120 V	POLE MOUNTED LIGHT
A2	LSI INDUSTRIES, INC.	SLM-LED-24L-SIL-5W-50-70CRI	POLE MOUNTED	LED	189.0 VA	208 V	POLE MOUNTED LIGHT
A3	LSI INDUSTRIES, INC.	SLM-LED-18L-SIL-FT-50-70CRI	POLE MOUNTED	LED	149.0 VA	120 V	POLE MOUNTED LIGHT
B	MWC	SCTADN1834	CORD	INCAN	200.0 VA	120 V	PENDANT / CHANDELIER
B1	ACUITY BRANDS LIGHTING	2X2 CPANL	RECESSED	LED	28.0 VA	120 V	LUMEN SWITCHABLE PANEL
BS	BY OWNER	BUILDING SIGNS	SURFACE	N/A	500.0 VA	120 V	COORDINATE WITH OWNER
C	TMS LIGHTING	SC30250-IN-C/S9845S	CORD	LED	9.0 VA	120 V	CALVIN PENDANT
EM	SURE-LITES	APEL	WALL MOUNTED	LED	0.6 VA	120 V	WALL MOUNTED EMERGENCY PACK
EM-1	COOPER LIGHTING	BY OWNER	WALL MOUNTED	LED	5.0 VA	120 V	EMERGENCY LIGHT
EM-2	COOPER LIGHTING	BY OWNER	WALL MOUNTED	LED	2.0 VA	120 V	EMERGENCY LIGHT
EMR	SURE-LITES	SRP25DWH	WALL MOUNTED	LED	2.5 VA	120 V	WALL MOUNTED EMERGENCY REMOTE HEADS
EX	SURE-LITES	SCAPCH7R	WALL MOUNTED	LED	5.0 VA	120 V	EXIT SIGN
FS	SURE-LITES	AEL2-46-WH	WALL MOUNTED	LED	10.0 VA	120 V	EGRESS LIGHT
G	LUMARK	LVL20UG	WALL MOUNTED	LED	18.0 VA	120 V	UNDER CANOPY LIGHT
H	TMS LIGHTING	SC30250-IN-H-F10/S9845S	CORD	LED	9.0 VA	120 V	LILL PENDANT
I	LUMENCIA	LL78B14 BN / W/1/2" X 24"	SURFACE	N/A	75.0 VA	120 V	52" CEILING FAN W/ 48" DOWNROD
J	TMS LIGHTING	SC30250-LD-J-F10	SURFACE	LED	20.0 VA	120 V	EXTERIOR GOOSENECK
K	TMS LIGHTING	SC30250-LD-K-F10	SURFACE	LED	19.0 VA	120 V	RLM DOME GOOSENECK
N	HALO	L806FL8030P/L652P/L909P/L908P	TRACK	LED	27.0 VA	120 V	TRACK HEAD LIGHT, WITH T8 - HALO SCL652, SCL909P, SCL908P TRACK
P	TMS LIGHTING	SC30250-INC-K-F10/S9845S	WALL	LED	9.0 VA	120 V	INTERIOR GOOSENECK
Q	METALUX	24FP6440C	RECESSED	LED	60.0 VA	120 V	2X4 LAY IN
R	HALO	SMD4S6927WHDM	RECESSED	LED	9.5 VA	120 V	4" SQUAR, RECESSED ABOVE CEILING
R1	ILP LIGHTING	FZ4B-44WLED-UNIV-40-CHAN	SURFACE	LED	45.0 VA	120 V	SURFACE MOUNT TO CEILING JOIST
S	MWC	TURBINA R4144 W/1/2" X 24" DOWNROD	SURFACE	N/A	0.0 VA	120 V	EXTERIOR CEILING FAN, COORDINATE WITH OWNER
S1	BY OWNER	BY OWNER	RECESSED	LED	20.0 VA	120 V	6"x6" CAN LIGHT
ST4	METALUX	4VT2-LD5-6-DR-UNV-L840-CD1-WL-U	SURFACE	FLOUR	51.0 VA	120 V	4' 2-BULB VAPOR TIGHT, MOUNT TO BOTTOM OF STRUCTURE
V	SATCO	64906/S9851	TRACK	LED	6.5 VA	120 V	VINTAGE TRACK MOUNTED PENDANT, WITH U8 - NUVO TR123, TP170 8' TRACK, WITH SATCO #80-2061 CONNECTION
Z	HARBOR BREEZE	#SLL48BK	CORD	LED	5.0 VA	120 V	STRING LIGHT

ELECTRICAL GENERAL NOTES

NOTE NUMBER	NOTE
1	ALL ISOLATED GROUND RECEPTACLES SHALL BE OF THE ISOLATED GROUND TYPE. ALL CIRCUITS SHALL CONTAIN A HOT, NEUTRAL, GROUND AND ISOLATED GROUND CONDUCTOR.
2	AMPACITY OF ALL CONDUCTOR SIZES SHOWN ON PLANS IS BASED ON 75 C RATED TERMINATIONS AND CONDUCTOR INSULATION. CONTRACTOR SHALL FIELD VERIFY EQUIPMENT TEMPERATURE RATINGS OF ALL TERMINATIONS AND ADJUST CONDUCTOR SIZES PER NEC 110.14(C)
3	ALL WIRING IS COPPER. REFER TO ELECTRICAL SPECIFICATIONS FOR FURTHER INFORMATION.
4	ALL WALL MOUNTED RECEPTACLES SHALL BE 18" A.F.F. ON CENTER. UNLESS OTHERWISE NOTED.
5	G.C. TO COORDINATE POWER REQUIREMENTS FOR EXTERIOR SIGNAGE.
6	EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUITS ORIGINATES. REF 2011 NEC (210.4)
7	THE UNGROUNDED AND GROUNDED CONDUCTORS OF EACH MULTIWIRE BRANCH CIRCUIT SHALL BE GROUPED BY WIRE TIES OR SIMILAR MEANS IN AT LEAST ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGINATION. REF 2011 NEC (210.4(D))
8	FURNISH AND INSTALL CORD AND CAP FOR ALL EQUIPMENT CONNECTED TO NEMA L-14R RECEPTACLE.
9	CONDUITS THAT ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, SUCH AS COOLERS, FREEZERS OR SERVICE ENTRANCE CONDUCTORS, SHALL BE SEALED TO PREVENT CIRCULATION OF AIR AND/OR MOISTURE. REF 2011 NEC (300.7 (A)).
10	CONDUIT AND WIRING IN AREAS WHERE EXPOSED SHALL BE ROUTED AT 90 DEGREE ANGLES PERPENDICULAR OR PARALLEL TO JOISTS. COORDINATE PAINTING OF CONDUIT WITH ARCHITECTURAL FINISHES.
11	SEISMIC ZONE REQUIREMENTS: PROVIDE EXPANSION COUPLINGS AND BRACING FOR ELECTRICAL EQUIPMENT AS REQUIRED BY LOCAL CODES.
12	CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS PRIOR TO ROUGH IN.
13	E.C SHALL COORDINATE FAULT CURRENT(Isc) RATING WITH UTILITY COMPANY AND SELECT PANEL AND BREAKER ACCORDINGLY.

UTILITY SERVICE INFORMATION

- METER FURNISHED BY UTILITY, INSTALLED BY UTILITY
- METER BASE FURNISHED BY UTILITY,INSTALLED BY CONTRACTOR
- CTs FURNISHED BY UTILITY, INSTALLED BY CONTRACTOR
- SECONDARY TRENCH, BACKFILL, CONDUIT, AND CONDUCTORS BY CONTRACTOR.
- PRIMARY CONDUITS FURNISHED AND INSTALLED BY CONTRACTOR.
- PRIMARY CONDUCTORS FURNISHED AND INSTALLED BY UTILITY



ONE LINE KEYNOTES:

A	NEW 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FOR THE PROJECT SPACE. E.C. SHALL VERIFY THE EXACT LOCATION WITH LANDLORD/UTILITY COMPANY IN FIELD.
B	NEW 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL CT CABINET, METER & DISCONNECT FOR THE PROJECT SPACE. E.C. SHALL VERIFY THE EXACT LOCATION OF ELECTRICAL CT CABINET, METER & DISCONNECT WITH LANDLORD/OWNER/UTILITY COMPANY IN FIELD. BASE BID ACCORDINGLY.
C	NEW 400A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A1". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
D	NEW 100A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A2". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER..
E	NEW 400A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
F	NEW 100A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
G	G.C SHALL COORDINATE WITH UTILITY FOR PROVISION OF CT CABINET IN THE UTILITY TRANSFORMER. PROVIDE CT CABINET AS SHOWN IN DRAWING IF REQUIRED. BASE BID ACCORDINGLY.

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E0.1

ONE-LINE DIAGRAM

SCALE: N.T.S.

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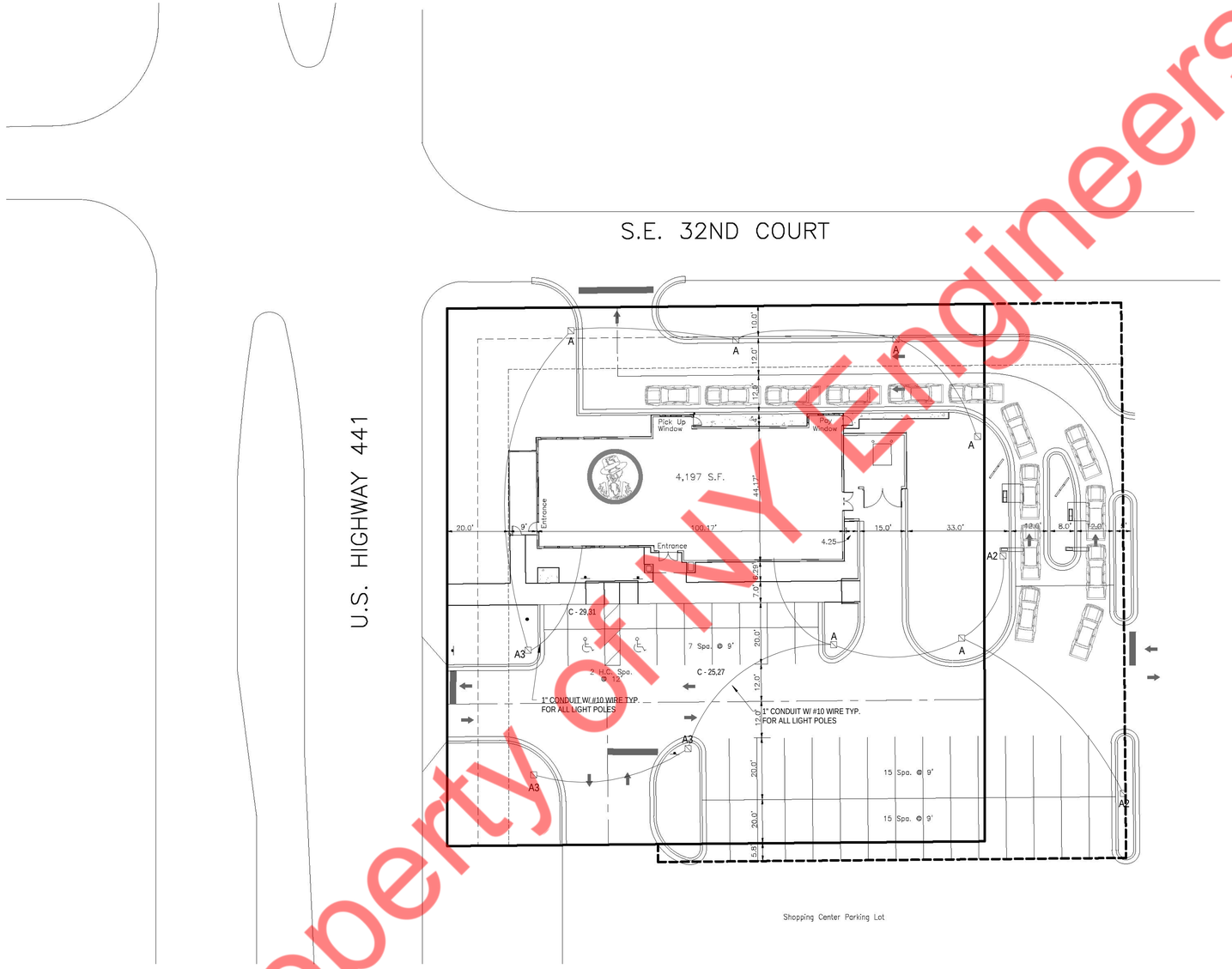
NOTES:

ALL THE SITE LIGHTING LOCATIONS & QUANTITIES ARE TENTATIVE/ASSUMED. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION & QUANTITIES OF SITE POLE LIGHTS PER THE SITE PHOTOMETRICS, MAKE PURCHASE ACCORDINGLY. BASE BID ACCORDINGLY.



1 E0.2

ELECTRICAL SITE PLAN

SCALE: 1" = 20' - 0"

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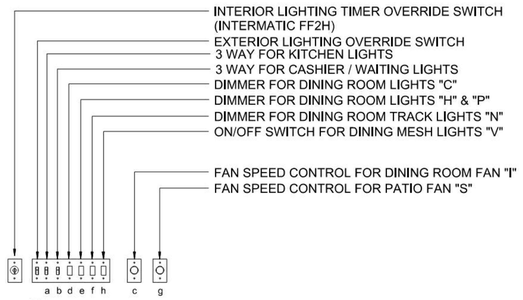


2
E2.0

SWITCH BANK DETAIL

SCALE: NO SCALE

GENERAL NOTES

1. EMERGENCY EXIT ILLUMINATION SHALL BE SUPPLIED FROM STORAGE BATTERY THAT IS TO PROVIDE 90 MINUTES OF CONTINUED ILLUMINATION IN CASE OF A PRIMARY POWER LOSS.

2. THE BRANCH CIRCUIT FEEDING THE UNIT EQUIPMENT (EMERGENCY LIGHT / EXIT SIGN WITH SELF CONTAINED RECHARGEABLE BATTERY) SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES OR TIME CLOCKS AS SHOWN ON PLANS.

3. EMERGENCY LUMINAIRES SHALL PROVIDE AN INITIAL AVERAGE ILLUMINATION LEVEL OF AT LEAST 1 FOOT-CANDLE BUT AT ANY POINT IT SHALL NOT BE LESS THAN 0.1 FOOT-CANDLE ALONG THE PATH OF EGRESS AT FLOOR LEVEL.

4. AT THE END OF THE REQUIRED EMERGENCY SOURCE TIME DURATION, THE EMERGENCY LUMINAIRES SHALL PROVIDE AN AVERAGE ILLUMINATION LEVEL OF AT LEAST 0.6 FOOT-CANDLE BUT AT ANY POINT IT SHALL NOT BE LESS 0.06 FOOT-CANDLE ALONG THE PATH OF EGRESS AT FLOOR LEVEL.

5. THE EMERGENCY ILLUMINATION LEVEL SHALL HAVE A MINIMUM-TO-MAXIMUM EMERGENCY ILLUMINATION UNIFORMITY RATIO THAT DOES NOT EXCEED 40:1.

6. CONDUIT AND WIRING IN AREAS WHERE EXPOSED SHALL BE ROUTED AT 90 DEGREE ANGLES PERPENDICULAR OR PARALLEL TO JOISTS. COORDINATE PAINTING OF CONDUIT WITH ARCHETECTURALFINISHES.

7. ALL LED FIXTURES TO HAVE A COLOR TEMPERATURE OF 3,000 OR LOWER TO MATCH COLOR OF INCANDESCENT FIXTURES.

8. ALL LIGHTNG PLAN DIMENSIONS TO FACE OF FINISH, TYP.

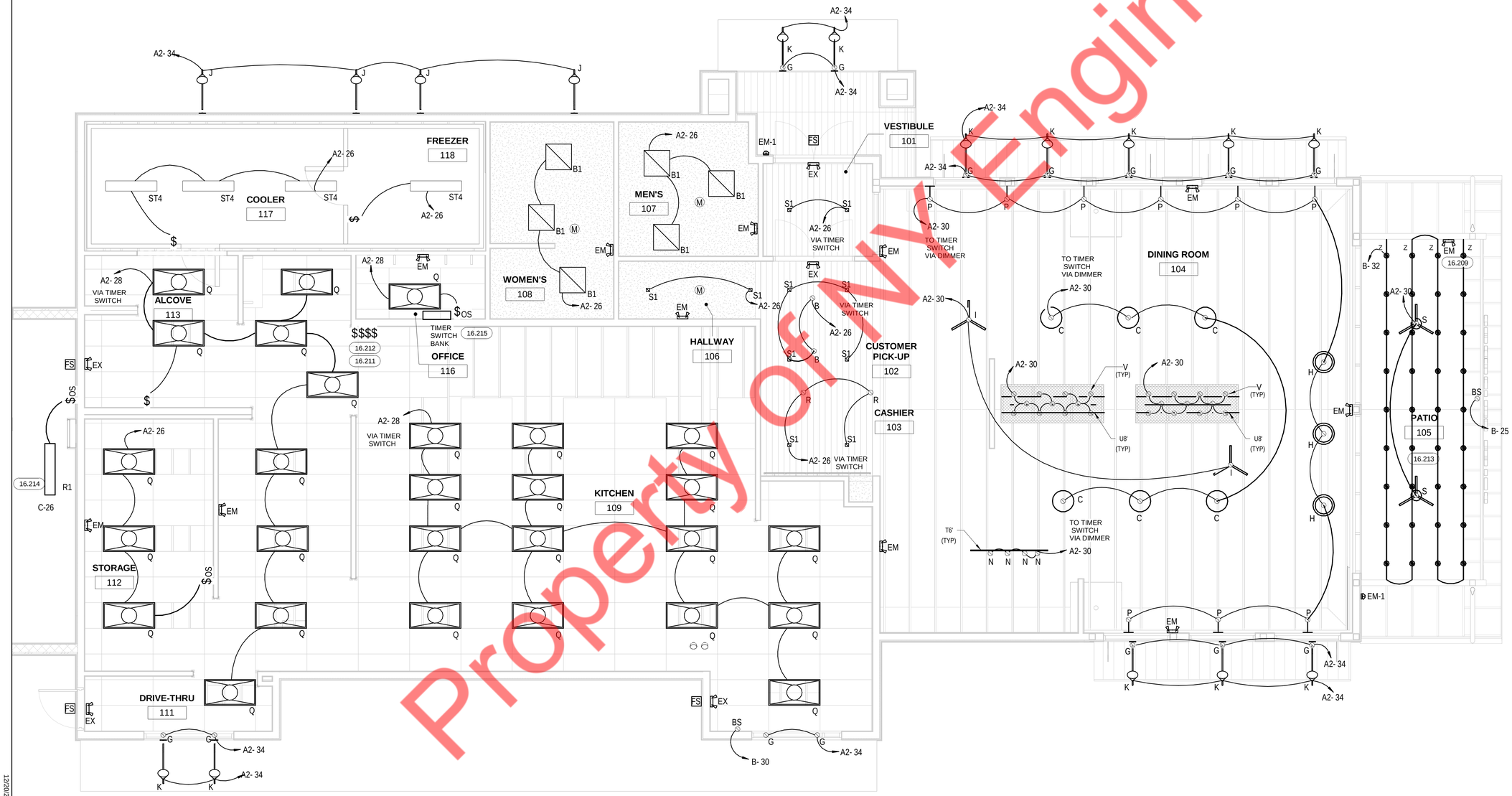
9. GOOSENECK (EXTERIOR) AND PENDANT (INTERIOR) LIGHTS NEAR BOOTH WINDOWS TO BE CENTERED ON WINDOW OPENING, TYP.

10. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS PRIOR TO ROUGH IN.

11. CONTRACTOR SHALL COORDINATE WITH SIGN VENDOR FOR EXACT POWER REQUIREMENT OF BUILDING SIGNAGE.

KEYNOTES:

16.203	EMERGENCY FIXTURE-CONNECT TO REMOTE OUTPUT EXIT SIGN. TYP.
16.209	MOUNT EMERGENCY LIGHTING TO ROOF JOIST IN PATIO AREA. ALL CONDUIT TO BE RAN TIGHT TO JOIST AND PAINTED TO MATCH JOIST COLOR.
16.211	ALL SWITCHES TO BE MOUNTED AT 48" A.F.F.
16.212	SWITCH BANK LOCATION, SEE SWITCH BANK DETAIL 2/E2.0.
16.213	PROVIDE STRING LIGHTS RUN ON EACH TRUSS OF PATIO. COORDINATE WITH OWNER. E.C TO COORDINATE EXACT MOUNTING HIGHT WITH VENDOR/OWNER IN THE FIELD.
16.214	E.C TO VERIFY EXACT LOCATION AND POWER REQUERMENT OF LIGHT INSIDE THE DRUMPSTER STORAGE BEFORE COMMENCING ANY WORK. REPORT ENGINEER FOR ANY DISCREPENCY. BASE BID ACCORDINGLY.
16.215	COORDINATE EXACT LOCATION OF THE TIMER SWITCH BANK WITH OWNER/ARCHITECT.



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E1.0

ELECTRICAL LIGHTING PLAN

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

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GENERAL NOTES

A. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS PRIOR TO ROUGH IN.

B. DEVICES SHALL BE NEMA 5-20 UNLESS NOTED OTHERWISE. TYP OF 120V-20A CIRCUITS.

C. ALL 125-VOLT THROUGH 250-VOLT RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE- PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE LOCATIONS SPECIFIED IN 210.8(B) SHALL HAVE GFCI PROTECTION. ALL THE KITCHEN EQUIPMENT SHALL BE PROVIDED WITH GFI RECEPTACLES, IF THE GFI RECEPTACLE ARE NOT READILY ACCESSIBLE THEN PROVIDE GFI BREAKER IN PANELS.

D. E.C. SHALL COORDINATE WITH THE EQUIPMENT VENDOR FOR EXACT RECEPTACLE/OUTLET REQUIREMENT AND WITH ARCHITECT/OWNER FOR EXACT LOCATION & MOUNTING HEIGHT OF THE RECEPTACLES IN THE FIELD.

KEYNOTES:

16.101 EXTERIOR SIGNAGE J-BOX. COORDINATE FINAL LOCATION WITH SIGNAGE CONTRACTOR AND CONSTRUCTION MANAGER.

16.104 EVAPORATOR SWITCH. REFER TO EVAPORATOR COIL WIRING DETAIL. VERIFY REQUIREMENTS WITH MANUFACTURER. PROVIDE ADDITIONAL CONTROL WIRING IF NEEDED.

16.105 ALL ELECTRICAL PENETRATIONS INTO THE COOLER / FREEZER SHALL BE SEALED PER NEC ARTICLE 300.7.

16.106 E.C. TO PROVIDE WIRING FOR COOLER AND / OR FREEZER DOOR HEATERS.

16.111 E.C. TO INSTALL WEATHERPROOF J-BOX FOR HEAT TRACE WHICH SUPPLIES FREEZE PROTECTION FOR FREEZER CONDENSATE LINES. FURNISH HEAT TRACE AND PROVIDE GFI-EPD CIRCUIT BREAKER AND INSTALL PER MANUFACTURER'S REQUIREMENTS. REFERENCE ELECTRICAL SPECIFICATIONS.

16.117 SERVICE RECEPTACLE. WEATHERPROOF GFCI IN MECHANICAL YARD.

16.120 ALL DEVICES ARE TO BE INSTALLED AT 48" IN KITCHEN UNLESS NOTED OTHERWISE.

16.121 NEW 400A(MCB), 208/120V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A1." E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

16.122 NEW 100A(M.L.O), 208/120V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A2." E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

16.123 NEW 400A(MCB), 208/120V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B." E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

16.124 NEW 100A(M.L.O), 208/120V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C." E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

16.125 RUN SIGNAGE AND EXTERIOR LIGHTING THROUGH TIMECLOCK DRIVEN CONTACTOR. PROVIDE NEMA-3R LOCAL MAINTENANCE DISCONNECT.

16.126 INTERMATIC ET8215C ASTRONOMIC TIMECLOCK. REF. E1.3.

16.129 T.V. DATA OUTLET BOX. E.C. TO SUPPLY BOX AND CONDUIT TO LOCATION. E.C. TO COORDINATE EXACT LOCATIONS WITH SLIMS CONSTRUCTION MANAGER.

16.130 GAS SOLENOID INSTALLED BY PLUMBING CONTRACTOR, CONNECTED BY ELECTRICAL CONTRACTOR. ROUTE VIA HOOD CONTROL / FIRE SUPPRESSION PANEL, AS REQUIRED. PROVIDE SEAL TIGHT CONNECTIONS.

16.134 J-BOX TO BE LOCATED ABOVE DRIVE THRU WINDOW FOR TIMER, STUB 1" CONDUIT ABOVE CEILING

16.135 J-BOX TO BE LOCATED ABOVE CEILING WITH 3/4" CONDUIT RAN TO DRIVE THRU MENU BOARD.

16.136 INTERLOCK FRYER CONTROLS WITH HOOD CONTROL PANEL TO SHUT OFF FRYER CONTROLS IN CASE OF EMERGENCY.

16.141 J-BOX MOUNTED AT 18" A.F.F. WITH 1" CONDUIT STUBBED OUT OF BUILDING FOR DRIVE THRU VEHICLE DETECTION GROUND LOOP AND 1" CONDUIT WITH PLASTIC BUSHING STUBBED UP ABOVE CEILING.

16.142 COORDINATE TV RECEPTACLE HEIGHT WITH G.C..

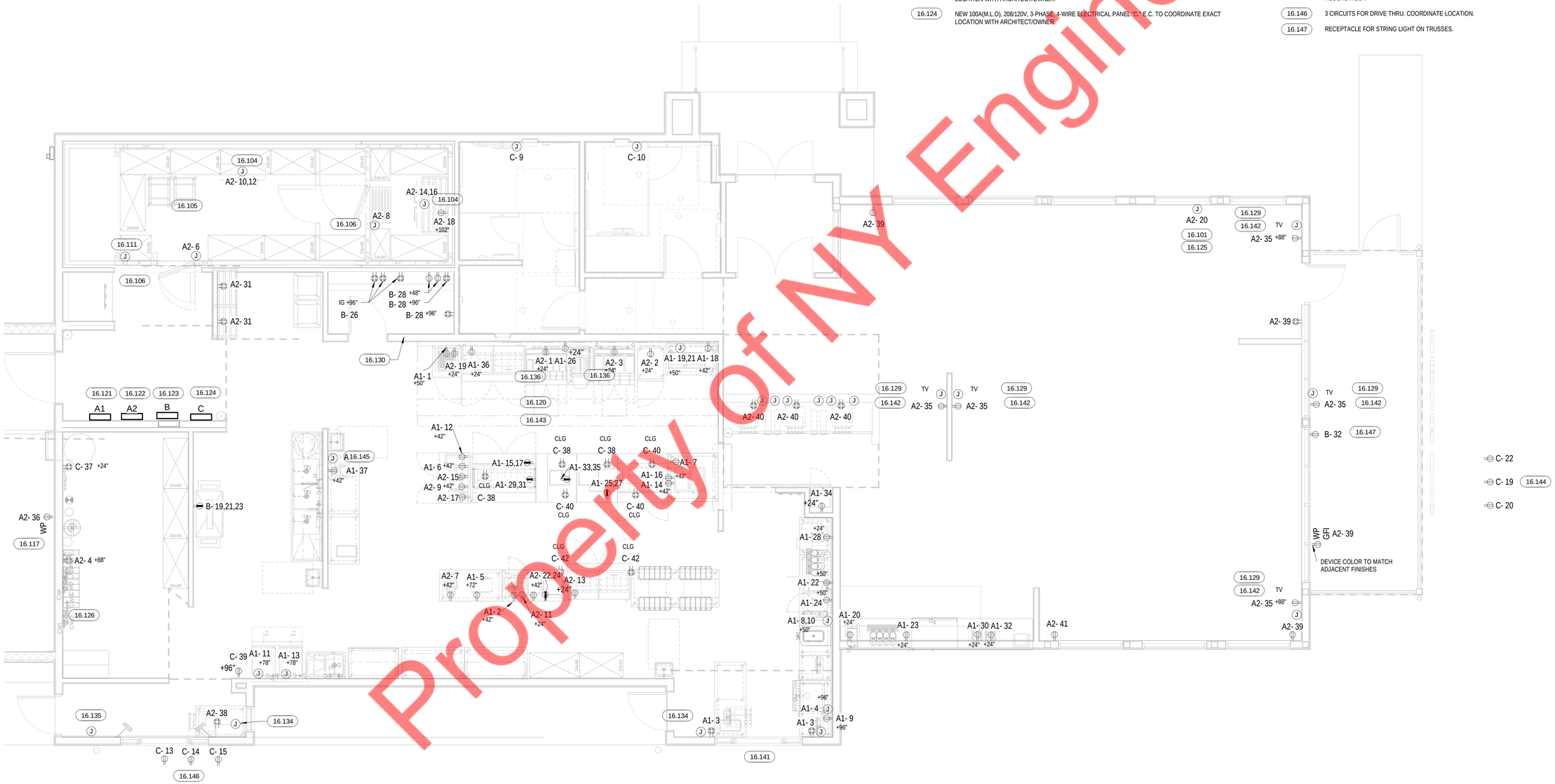
16.143 ALL RECEPTACLES IN KITCHEN SHALL BE GFCI.

16.144 3 CIRCUITS FOR MONUMENT SIGN. COORDINATE LOCATION.

16.145 ELECTRICAL CONTRACTOR TO CO-ORDINATE WITH FIRE SUPPRESSION SYSTEM VENDOR FOR ITS POWER REQUIREMENT AND OTHER DETAILS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.

16.146 3 CIRCUITS FOR DRIVE THRU. COORDINATE LOCATION.

16.147 RECEPTACLE FOR STRING LIGHT ON TRUSSES.



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ELECTRICAL POWER PLAN

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

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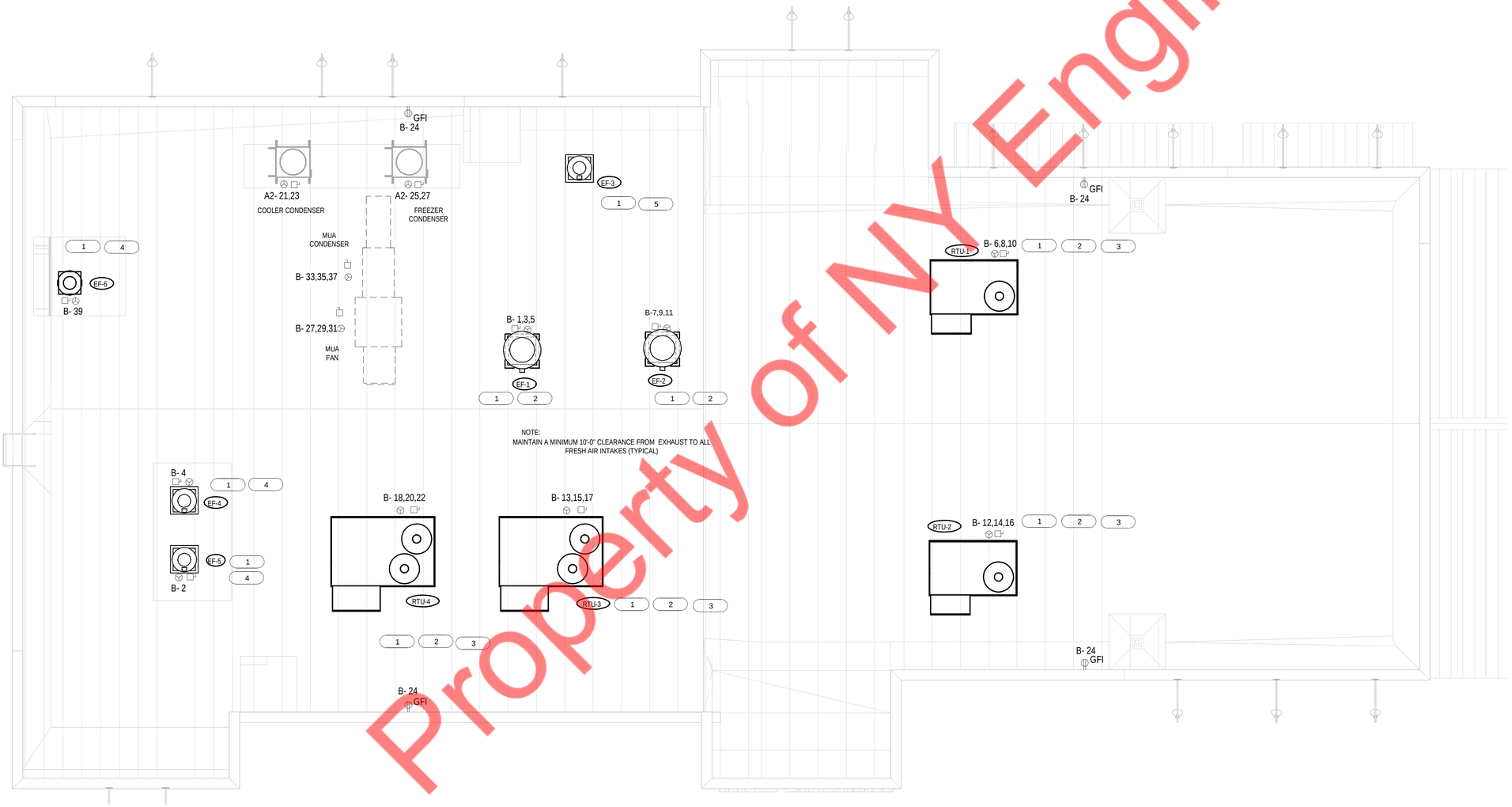
GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS PRIOR TO ROUGH IN.
2. ELECTRICAL CONTRACTOR AND PLUMBING CONTRACTOR WILL PROVIDE PITCH POCKETS FOR HVAC EQUIPMENT CONNECTIONS. DO NOT PENETRATE BOTTOM OF FAN OR RTU CURB.
3. FACTORY CURB CONVERSION SHALL NOT BE ACCEPTED. FOR ORDERING INFORMATION REFER TO THE NCA HVAC EQUIPMENT PACKAGE NOTE. SHEET M-1.
4. ELECTRICAL PENETRATION THROUGH ROOF WITH PITCH POCKET PROVIDED BY ELECTRICAL CONTRACTOR(TYPICAL.)

KEYNOTES:

1. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL EQUIPMENTS WITH MECHANICAL DRAWINGS.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
3. CONNECT CIRCUITRY TO FACTORY INSTALLED DISCONNECT AS INDICATED ON PLANS. CONDUIT AND WIRING TO RTU SHALL BE THROUGH RTU ROOF CURB. NO PENETRATIONS WILL BE ALLOWED AND NO CONDUITS ROUTED ACROSS ROOF.
4. EF-4, EF-5 AND EF-6 SHALL BE INTERLOCKED WITH KITCHEN LIGHTS. E.C. SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH IN.
5. EF-3 SHALL BE INTERLOCKED WITH DINING AREA LIGHTS. E.C. SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR IN THE FIELD. PRIOR TO ROUGH IN.



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ELECTRICAL ROOF POWER PLAN

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

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DATA/TELEPHONE DEVICE SCHEDULE

ID	DESCRIPTION	CABLE	TERMINATION	ORIGIN
AP-1	ACCESS POINT 1	CAT5	RJ45	PRIVATE NETWORK
AP-2	ACCESS POINT 1	CAT5	RJ45	PRIVATE NETWORK
D-100	POS 1	CAT5	RJ45	POS NETWORK SWITCH
D-101	POS 2	CAT5	RJ45	POS NETWORK SWITCH
D-103	MENU BOARD	#24AWG HDMI (50FT.), #24AWG HDMI (50FT.)	HDMI, HDMI	MENU BOARD CONTROLLER
D-104	MENU BOARD	#24AWG HDMI (50FT.), #24AWG HDMI (50FT.)	HDMI, HDMI	MENU BOARD CONTROLLER
D-105	DRIVE-THRU	CAT5	RJ45	OFFICE
D-106	POS 4	CAT5	RJ45	POS NETWORK SWITCH
D-107	POS 5	CAT5	RJ45	POS NETWORK SWITCH
D-110	KITCHEN MONITOR 1(COOK KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111,D-111
D-111	KITCHEN MONITOR 2(SAUSE KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA), RJ45, RJ45	MICROS EQUIPMENT, MICROS EQUIPMENT, MICROS NETWORK, MICROS NETWORK
D-112	DVR	CAT5	RJ45	PRIVATE NETWORK SWITCH
D-113	OFFICE	CAT5	RJ45	OFFICE
D-114	OFFICE	CAT5	RJ45	OFFICE
D-115	AMBIANCE MEDIA PLAYER	CAT5	RJ45	PRIVATE NETWORK SWITCH
D-116	MICROS SERVER	CAT5	RJ45	PRIVATE NETWORK SWITCH
D-117	SAFE	CAT5	RJ45	PRIVATE NETWORK SWITCH
D-118 (2)	CAMERA MONITOR	CAT5, CAT5	RJ45, RJ45	PRIVATE NETWORK SWITCH, D119
D-119	TICKET PRINTER	CAT5	RJ45	POS NETWORK SWITCH
D-120	CAMERA MONITOR	CAT5, CAT5	RJ45, RJ45	PRIVATE NETWORK SWITCH
D-121	KITCHEN MONITOR 3(QB KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-122	KITCHEN MONITOR 4(SSW KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-123	KITCHEN MONITOR 5(SAUSE KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-124	KITCHEN MONITOR 6(QB KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-125	POS CABINET	CAT5	RJ45	POS NETWORK SWITCH
D-126	POS CABINET	CAT5	RJ45	POS NETWORK SWITCH
D-127	Q-TIMER	CAT5	RJ45	POS NETWORK SWITCH
D-128	POS 6	CAT5	RJ45	POS NETWORK SWITCH
D-129	KITCHEN MONITOR 7(DRIVE THRU QB KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-130	KITCHEN MONITOR 8(DINE-IN KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-131	KITCHEN MONITOR 9(BEVERAGE KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
D-132	KITCHEN MONITOR 10(DRIVE-THRU KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111
DT-100	PRIVATE NETWORK, TELEPHONE	CAT5, TWISTED PAIR	RJ45, RJ11	OFFICE
DT-101	PRIVATE NETWORK, TELEPHONE	CAT5, TWISTED PAIR	RJ45, RJ11	PRIVATE NETWORK, TELEPHONE DEMARC
DT-102	PRIVATE NETWORK, TELEPHONE	CAT5, TWISTED PAIR	RJ45, RJ11	OFFICE
TV-1	TELEVISION 1	RG-6/U COAXILE, CAT 5	TYPE F COAXILE, RJ45	CABLE SERVICE EQUIPMENT, PRIVATE NETWORK SWITCH
TV-2	TELEVISION 2	RG-6/U COAXILE, CAT 5	TYPE F COAXILE, RJ45	CABLE SERVICE EQUIPMENT, PRIVATE NETWORK SWITCH
TV-3	TELEVISION 3	CAT5	RJ45	TV-1
TV-4	TELEVISION 4	CAT5	RJ45	TV-2
TV-6	TELEVISION 6	CAT5	RJ45	TV-1
TV-7	TELEVISION 7	CAT5	RJ45	TV-2
EX-100	EXT. MENU BOARDS	CAT5	RJ45	OFFICE
EX-101	EXT., PREVIEW BOARD	CAT5	RJ45	EXT., MENU BOARD
D-133	KITCHEN MONITOR 11(DT DRINK KDS)	VGA, VGA, CAT5, CAT5	MALE DE-15(VGA), MALE DE-15(VGA),	D-111

KEYNOTES:

16.300 ROUTE (1) 1"C. FROM INTERIOR TV DATA BOX TO EXTERIOR TV DATA BOX FOR TV SERVICE CABLES.

16.301 LVC SHALL PROVIDE COAXIAL SPLITTER. SPLIT INCOMING CABLE FROM CABLE SERVICE EQUIPMENT TO TV-1 AND TV-2.

16.302 PROVIDE 1-1/2"C. SURFACE MOUNT TO WALL FROM 12" BELOW CEILING SPACE TO ABOVE CEILING SPACE. TERMINATE WITH BUSHING.

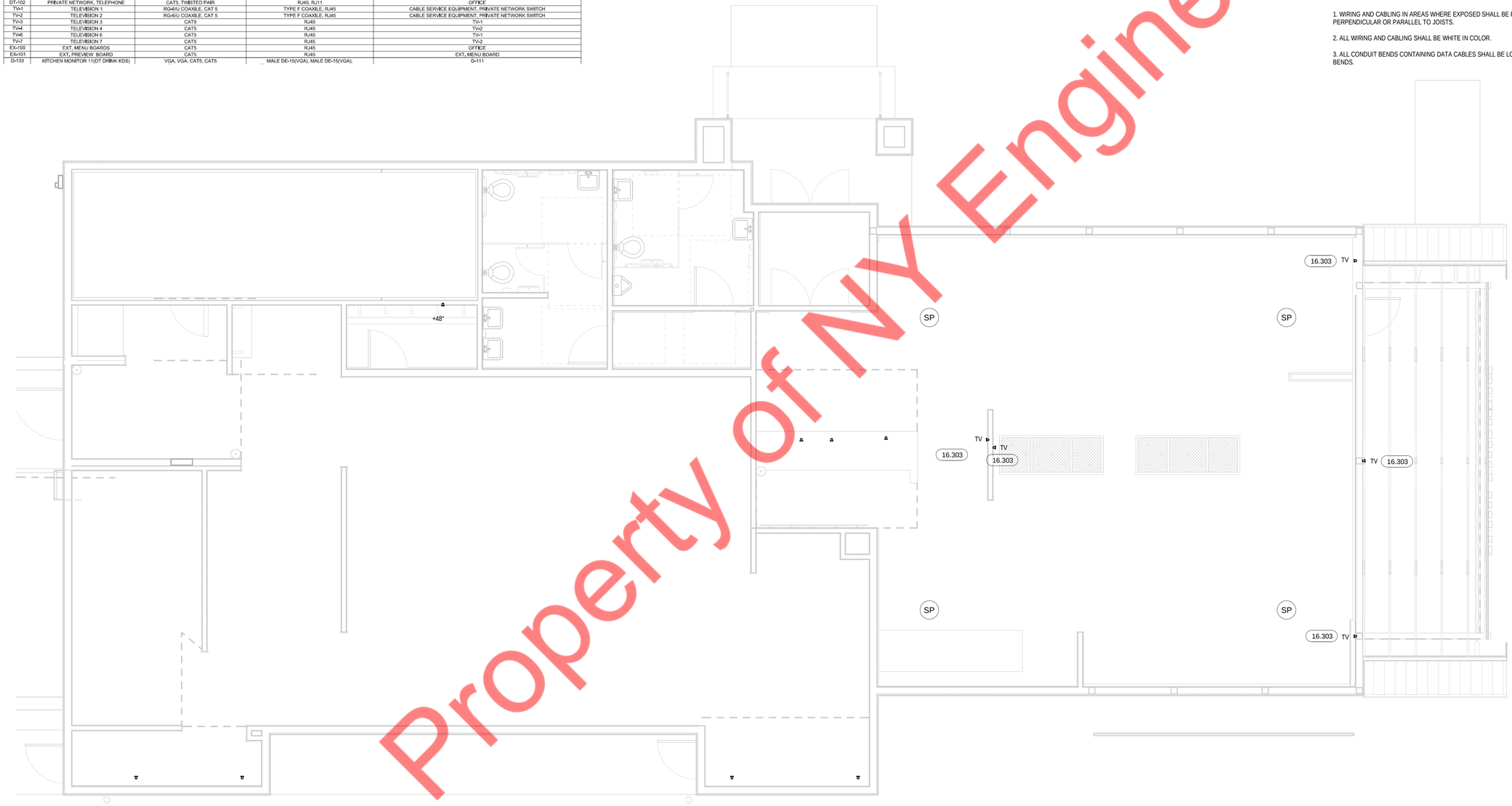
16.303 COORDINATE TV DATA OUTLET HEIGHT WITH G.C.

GENERAL NOTES:

1. WIRING AND CABLING IN AREAS WHERE EXPOSED SHALL BE ROUTED AT 90 DEGREE ANGLES PERPENDICULAR OR PARALLEL TO JOISTS.

2. ALL WIRING AND CABLING SHALL BE WHITE IN COLOR.

3. ALL CONDUIT BENDS CONTAINING DATA CABLES SHALL BE LONG SWEEPS, NO 90 DEGREE BENDS.



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E3.0

ELECTRICAL LOW VOLTAGE PLAN

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

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A1

Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: -
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	<Comments> <Load Name>	Trip	Poles	A		B		C		Poles	Trip	<Comments> <Load Name>	CKT
1	PANNI PRESS	20 A	1	1.800	1.800					1	20 A	UPRIGHT TOASTER	2
3	POS	20 A	1			0.720	0.500			1	20 A	ICE MACHINE (NUGGET)	4
5	MICROWAVE	20 A	1					1.608	1.800	1	20 A	UPRIGHT TOASTER	6
7	SAND. / SALAD PREP REF.(DBL-SIDED)	20 A	1	0.748	2.704					2	20 A	SOFT SERVE MACHINE	8
9	COUNTER TOP SODADISPENCER	20 A	1			0.400	2.704			--	--	--	10
11	ICE MACHINE	20 A	1					0.500	1.200	1	20 A	COUNTER TOP HOT FOOD WELL	12
13	ICE MACHINE	20 A	1	0.500	1.200					1	20 A	COUNTER TOP HOT FOOD WELL	14
15	5 - WELL HOT FOOD WELL	20 A	2			1.150	1.200			1	20 A	COUNTER TOP HOT FOOD WELL	16
17	--	--	--					1.150	1.200	1	20 A	COUNTER TOP HOT FOOD WELL	18
19	COUNTER TOP HOIDDLE, ELECTRIC	20 A	2	2.025	1.680					1	20 A	TEA BREWER	20
21	--	--	--			2.025	0.480			1	20 A	TEA BREWER	22
23	COUNTER TOP SODA DISPENSER	20 A	1					0.575	0.400	1	20 A	UNDER COUNTER REFRIGERATOR	24
25	DROP-IN HOT FOOD UNIT	20 A	2	1.150	1.950					1	30 A	FRIED FOOD STATION	26
27	--	--	--			1.150	0.340			1	20 A	LEMONADE DISP.	28
29	PRODUCT HOLDING UNIT	20 A	2					0.603	0.340	1	20 A	LEMONADE DISP.	30
31	--	--	--	0.603	0.340					1	20 A	LEMONADE DISP.	32
33	PRODUCT HOLDING UNIT	20 A	2			0.603	0.300			1	20 A	FRIDGE / MERCHANDIZER	34
35	--	--	--					0.603	0.528	1	20 A	BREADING STATION REFRIGERATOR(60")	36
37	COUNTERTOP INDUCTION RANGE	20 A	1	1.800	11.019					3	100 A	A2	38
39	CONTROL PANEL (HOOD)	20 A	1			0.500	12.672			--	--	--	40
41	Space	--	1					--	8.383	--	--	--	42
		Total Load:		29.319 kVA		24.740 kVA		18.890 kVA					
		Total Amps:		252 A		214 A		157 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	3739 VA	100.00%	3739 VA		
Motor	5650 VA	100.00%	5650 VA	**Total Conn. Load:**	72.946 kVA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	55.385 kVA
Power	18468 VA	100.00%	18468 VA	**Total Conn. Current:**	202 A
Receptacles	45125 VA	61.08%	27562 VA	**Total Est. Demand Current:**	154 A

Notes:

B

Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: --
Mains Rating: 400 A
MCB Rating: 400 A

Notes:

CKT	<Comments> <Load Name>	Trip	Poles	A		B		C		Poles	Trip	<Comments> <Load Name>	CKT
1	EF-1	20 A	3	0.991	0.557					1	20 A	EF-5	2
3	--	--	--			0.991	--			1	--	Space	4
5	--	--	--					0.991	3.362	3	50 A	RTU-1	6
7	EF-2	20 A	3	0.991	3.362					--	--	--	8
9	--	--	--			0.991	3.362			--	--	--	10
11	--	--	--					0.991	3.362	3	50 A	RTU-2	12
13	RTU-3	50 A	3	4.924	3.362					--	--	--	14
15	--	--	--			4.924	3.362			--	--	--	16
17	--	--	--					4.924	4.924	3	50 A	RTU-4	18
19	DISHWASHER	60 A	3	5.400	4.924					--	--	--	20
21	--	--	--			5.400	4.924			--	--	--	22
23	--	--	--					5.400	0.720	1	20 A	ROOF RECEPTACLES	24
25	BUILDING SIGNS	20 A	1	0.500	1.080					1	20 A	RECEPTACLES	26
27	MUA FAN	20 A	3			2.500	1.080			1	20 A	RECEPTACLES	28
29	--	--	--					2.500	0.500	1	20 A	BUILDING SIGNS	30
31	--	--	--	2.500	0.185					1	20 A	STRING LIGHT RECEPTACLE	32
33	MUA CONDENSER	30 A	3			2.546	0.000			1	20 A	Spare	34
35	--	--	--					2.546	0.000	1	20 A	Spare	36
37	--	--	--	2.546	4.935					3	100 A	C	38
39	EF-6	20 A	1			0.182	3.960			--	--	--	40
41	EF-4	20 A	1					0.182	1.470	--	--	--	42
		Total Load:		36.256 kVA		34.221 kVA		31.871 kVA					
		Total Amps:		305 A		288 A		266 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	1050 VA	100.00%	1050 VA		
Motor	71718 VA	100.00%	71718 VA	**Total Conn. Load:**	102.348 kVA
Power	1000 VA	100.00%	1000 VA	**Total Est. Demand:**	93.058 kVA
Receptacles	28580 VA	67.49%	19290 VA	**Total Conn. Current:**	284 A
				Total Est. Demand Current:	258 A

Notes:

A2

Supply From: A1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: --
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	<Comments> <Load Name>	Trip	Poles	A		B		C		Poles	Trip	<Comments> <Load Name>	CKT
1	DEEP FAT TWO FRY BATTERY W/FILTER...	20 A	1	0.480	0.540					1	20 A	REACH IN FRIGER	2
3	DEEP FAT TWO FRY BATTERY W/FILTER...	20 A	1			0.480	1.200			1	20 A	BAG N BOX CARBONATOR	4
5	Space	--	1					--	2.000	1	30 A	WALK IN COOLER FREEZER	6
7	WAFFLE BAKER	20 A	1	1.800	2.000					1	30 A	WALK IN COOLER FREEZER	8
9	WAFFLE BAKER	20 A	1			1.300	0.105			2	20 A	COOLER EVAP COIL	10
11	U.C REFRIGERATOR W/GLASS DOOR	20 A	1					0.292	0.105	--	--	--	12
13	SAND. / SALAD PREP REFRIGARATOR(60")	20 A	1	0.506	1.150					2	20 A	FREEZER EVAP COIL	14
15	SAND. / SALAD PREP REF.	20 A	1			1.024	1.150			--	--	--	16
17	48" WORKTOP FRIDGE	20 A	1					0.311	2.000	1	30 A	HEAT TAPE	18
19	WORK TOP REFRIGERATOR(28")	20 A	1	0.246	0.500					1	20 A	EXT. SIGNAGE	20
21	COOLER CONDENSER	20 A	2			1.250	0.603			2	20 A	Receptacles	22
23	--	--	--					1.250	0.603	--	--	--	24
25	FREEZER CONDENSER	20 A	2	1.575	1.143					1	20 A	LIGHTING	26
27	--	--	--			1.575	1.500			1	20 A	LIGHTING	28
29	Spare	20 A	1					0.000	0.563	1	20 A	LIGHTING	30
31	GENERAL PURPOSE RECEPTACLES	20 A	1	0.720	0.000					1	20 A	Spare	32
33	Spare	20 A	1			0.000	0.572			1	20 A	EXT. LIGHTING	34
35	TVs	20 A	1					0.900	0.180	1	20 A	ENTRY / OUTSIDE RECEPTS	36
37	Spare	20 A	1	0.000	0.360					1	20 A	POS	38
39	RECEPTACLES	20 A	1			0.900	1.080			1	20 A	POS	40
41	RECEPTACLES	20 A	1					0.180	0.000	1	20 A	Spare	42
		Total Load:		11.019 kVA		12.672 kVA		8.383 kVA					
		Total Amps:		95 A		109 A		70 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	3739 VA	100.00%	3739 VA		
Motor	5650 VA	100.00%	5650 VA	**Total Conn. Load:**	32.070 kVA
Other	0 VA	0.00%	0 VA	**Total Est. Demand:**	29.219 kVA
Power	7010 VA	100.00%	7010 VA	**Total Conn. Current:**	89 A
Receptacles	15704 VA	81.84%	12852 VA	**Total Est. Demand Current:**	81 A

Notes:

C

Supply From: B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: --
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	<Comments> <Load Name>	Trip	Poles	A		B		C		Poles	Trip	<Comments> <Load Name>	CKT
1	Spare	20 A	1	0.000									2
3	Spare	20 A	1			0.000							4
5	Spare	20 A	1					0.000					6
7	Spare	20 A	1	0.000									8
9	HAND DRYER	20 A	1			0.500	0.500			1	20 A	HAND DRYER	10
11	Spare	20 A	1					0.000	0.000	1	20 A	Spare	12
13	DRIVE THRU	20 A	1	0.500	0.500					1	20 A	DRIVE THRU	14
15	DRIVE THRU	20 A	1			0.500	0.000			1	20 A	Spare	16
17	Spare	20 A	1					0.000	0.000	1	20 A	Spare	18
19	MONUMENT SIGN	20 A	1	0.500	0.500					1	20 A	MONUMENT SIGN	20
21	Spare	20 A	1			0.000	0.500			1	20 A	MONUMENT SIGN	22
23	Spare	20 A	1					0.000	0.000	1	20 A	Spare	24
25	LIGHT POLES	20 A	2	0.700	0.045					1	20 A	STORAGE LIGHT	26
27	--	--	--			0.700	0.000			1	20 A	Spare	28
29	LIGHT POLES	20 A	2					0.750	0.000	1	20 A	Spare	30
31	--	--	--	0.750	0.000					1	20 A	Spare	32
33	Spare	20 A	1			0.000	0.000			1	20 A	Spare	34
35	Spare	20 A	1					0.000	0.000	1	20 A	Spare	36
37	CO2 MONITOR	20 A	1	0.360	1.080					1	20 A	SCREENS	38
39	HEADSET	20 A	1			0.180	1.080			1	20 A	SCREENS	40
41	Spare	20 A	1					0.000	0.720	1	20 A	SCREENS	42
		Total Load:		4.935 kVA		3.960 kVA		1.470 kVA					
		Total Amps:		44 A		36 A		12 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	45 VA	100.00%	45 VA		
Power	1000 VA	100.00%	1000 VA	**Total Conn. Load:**	10.365 kVA
Receptacles	9320 VA	100.00%	9320 VA	**Total Est. Demand:**	10.365 kVA
				Total Conn. Current:	29 A
				Total Est. Demand Current:	29 A

Notes:

PLUMBING FIXTURE SCHEDULE

CALLOUT	TYPE	MANUFACTURER	MODEL	DESCRIPTION
FCO		WATTS	CO-274	Floor Cleanout with Round Fixed Top
WC-1	WATER CLOSET - ADA	AMERICAN STANDARD	MADERA	ADA, FLOOR MOUNT, FLUSH VALVE, 1.28 GPF
WC-2	WATER CLOSET	AMERICAN STANDARD	MADERA	FLOOR MOUNT, FLUSH VALVE, 1.28 GPF
U-1	URINAL	AMERICAN STANDARD	WASHBROOK	WASHBROOK FLOWISE HIGH EFFICIENCY (HEU) URINAL, WALL HUNG FLUSH VALVE, VITEREOUS CHINA, (0.125 GAL.) PER FLUSH, EXTENDED SIDES FOR PRIVACY, INTERGAL FLUSHING
L-1	LAVATORY	AMERICAN STANDARD	DECLYN	ADA, WALL MOUNT, VITREOUS CHINA, 4" CENTER HOLE, AMERICAN STANDARD COLONY PRO, 0.5 GPM, SINGLE HANDLE FAUCET, TEMPERING VALVE FOR 110 F MAX. DHW
FS-1		WATTS	FS-710	8" SQUARE, 3" DRAIN, 6" DEEP, ACID RESISTANT ENAMEL COATED, BOTTOM DOME STRAINER
L-2	LAVATORY	AMERICAN STANDARD	DECLYN	WALL MOUNT, VITREOUS CHINA, 4" CENTER HOLE, AMERICAN STANDARD COLONY PRO, 0.5 GPM, SINGLE HANDLE FAUCET, TEMPERING VALVE FOR 110 F MAX. DHW
TD-1	TRENCH DRAIN	WATTS	DEAD LEVEL S	6" WIDE X 48" LONG, STANDARD IRON FRAME; UV STABALIEZED TALC-FILLED POLYPROPYLENE CHANNELS WITH INTEGRAL 4" IPS THREADED BOTTOM OUTLET
FD-1	FLOOR DRAIN	WATTS	FD-100-A	ROUND, 2" DRAIN, EPOXY COATED CAST IRON, ADJUSTABLE STRAINER
HS-1	HAND SINK	REGENCY	600HS17	17"x15", WALL MOUNTED, 20 GAUGE STAINLESS STEEL, WITH GOOSENECK FAUCET, 1.5 GPM
HB-1	HOSE BIB	WOODFORD	MODEL 19	FREEZELESS, ANTI BURST, ANTI-SIPHON
RD-1	ROOF DRAIN	SIOUX CHIEF	868-I4	DRAIN BODY W/COLLAR / DOME STRAINER - 4" NO-HUB

PLUMBING EQUIPMENT SCHEDULE

CALLOUT	TYPE	MANUFACTURER	MODEL	DESCRIPTION
WH-1	WATER HEATER	A.O.SMITH	CYCLONE XI- BTX-100	95% EFFICIENT,100,000 BTU/H, 50 GALLON CAPACITY, GAS WATER HEATER, PROVIDE OPTIONAL CONCENTRIC VENT KIT
CP-1	CIRCULATION PUMP	TACO	0010-SF3	1/6 HP, STAINLESS STEEL FOR POTABLE WATER
BFP-1	BACKFLOW PREVENTER	WATTS	LF009M2QT	2" REDUCED PRESSURE ZONE ASSEMBLY, BRONZE BODY CONSTRUCTION, NPT CONNECTIONS, REPLACEABLE SEALS
GM-1	GAS METER	-	-	PER GAS COMPANY REQUIREMENTS
PR-1	PRESSURE REGULATOR	AMERICAN METER	1813B	BASIC REGULATOR WITH FULL CAPACITY INTERNAL RELIEF WITH 3/4" VENT, SPRING # 71424P020, ORIFICE SIZE 1/4"
GRT-1	GREASE RECOVERY TANK	DARPRO SOLUTIONS	CLEANSTAR 2500-H	HIGH TEMP. THREAD SEALANT, CONSULT MFR @ 501-920-5074 FOR MINIMUM PIPE RUN.

PLUMBING ABBREVIATIONS

SS	SANITARY SEWER
SD	STORM DRAIN
GW	GREASE WASTE
IW	INDIRECT WASTE
CD	CONDENSATE DRAIN
VTR	VENT THRU ROOF
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
FW	FILTERED WATER
FCO	FLOOR CLEAN-OUT
POC	POINT OF CONNECTION
POR	POINT OF REMOVAL
SOV	SHUT-OFF VALVE
GPM	GALLONS PER MINUTE
TYP	TYPICAL

PLUMBING GENERAL NOTES

NOTE NUMBER	NOTE
1	THE PLUMBING CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR TO COMPLETE THE WORK INDICATED ON THE DRAWINGS AND SPECIFICATIONS.
2	ALL WORK SHALL BE COMPLETED IN COMPLIANCE WITH THE INTERNATIONAL PLUMBING CODE, AND OTHER STATE AND LOCAL CODES.
3	THE PLUMBING CONTRACTOR SHALL VERIFY ALL LOADS AND PIPE SIZES PRIOR TO STARTING WORK.
4	THE PLUMBING CONTRACTOR SHALL MAINTAIN ALL REQUIRED CLEARANCES AROUND PLUMBING EQUIPMENT, AND COORDINATE WITH OTHER TRADES TO MAINTAIN CODE REQUIRED CLEARANCES.
5	FOR FIRE RATED WALLS AND CEILINGS, SEE ARCHITECTURAL DRAWINGS.
6	ALL PENETRATIONS THROUGH WALLS, ROOFS, AND FLOORS SHALL BE FIRE STOPPED.
7	THE PLUMBING CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY, AND PROVIDE ALL LABOR AND MATERIAL, AND PAY FEES TO PROVIDE A COMPLETE PLUMBING SYSTEM.
8	FOR FIXTURE HEIGHT AND ACCESSIBILITY REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.
9	ALL INVERT ELEVATIONS (TOP OF PIPE) REPRESENTED BY - X.XX FT. ARE BELOW FINISHED FLOOR ELEVATION.
10	COORDINATE FIXTURE AND EQUIPMENT LOCATIONS, AND UTILITY CONNECTIONS, WITH OTHER TRADES.
11	ADA WATER CLOSET HANDLE TO BE LOCATED ON ACCESSIBLE SIDE.

ENERGY CONSERVATION NOTES

1. AS PER 2020 FLORIDA ENERGY CONSERVATION CODE SECTION C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.10 OF MINIMUM PIPE INSULATION THICKNESS.

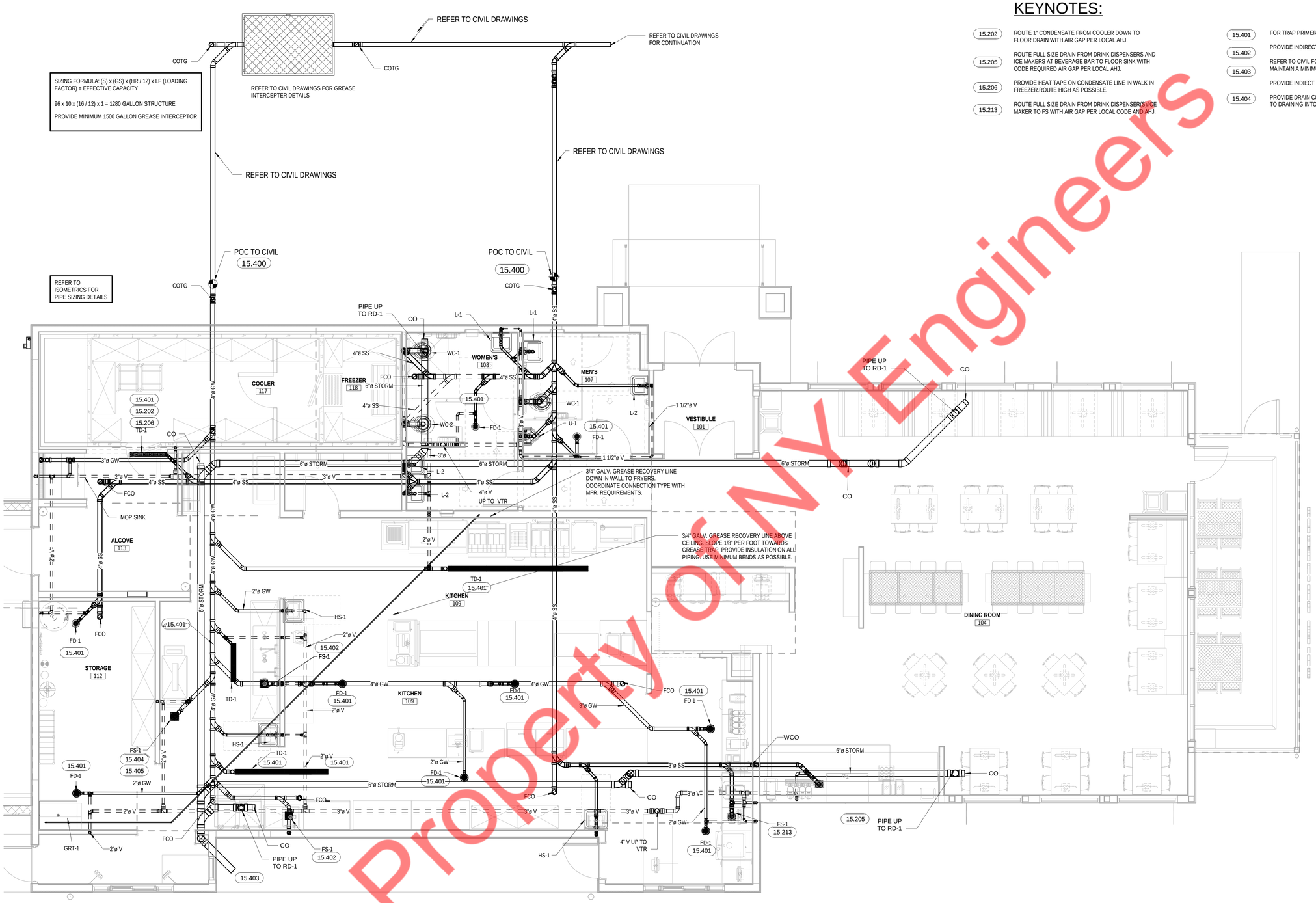
MINIMUM PIPE INSULATION THICKNESS					
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)		
	CONDUCTIVITY BTU· IN./ (H· FT2· °F)	MEAN RATING TEMPERATURE,°F	<1	1 TO <1½	1½ TO <4
141-200	0.25-0.29	125	1.5	1.5	2.0
105-140	0.21-0.28	100	1.0	1.0	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0

2. AS PER 2020 FLORIDA ENERGY CODE SECTION C404.6.1, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RE-CIRCULATING PUMP AND THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.

3. AS PER 2020 FLORIDA ENERGY CODE SECTION C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:

A. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.

B. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).



KEYNOTES:

15.202	ROUTE 1" CONDENSATE FROM COOLER DOWN TO FLOOR DRAIN WITH AIR GAP PER LOCAL AHJ.
15.205	ROUTE FULL SIZE DRAIN FROM DRINK DISPENSERS AND ICE MAKERS AT BEVERAGE BAR TO FLOOR SINK WITH CODE REQUIRED AIR GAP PER LOCAL AHJ.
15.206	PROVIDE HEAT TAPE ON CONDENSATE LINE IN WALK IN FREEZER.ROUTE HIGH AS POSSIBLE.
15.213	ROUTE FULL SIZE DRAIN FROM DRINK DISPENSER(S) ICE MAKER TO FS WITH AIR GAP PER LOCAL CODE AND AHJ.
15.401	FOR TRAP PRIMER DETAIL, SEE 6/P4.0.
15.402	PROVIDE INDIRECT DRAIN FROM SINK TO FS.
15.403	REFER TO CIVIL FOR CONTINUATION OF STORM PIPING. MAINTAIN A MINIMUM 30" COVER.
	PROVIDE INDIECT DRAIN FROM DISH WASHER, AND SCRAP SINK.
15.404	PROVIDE DRAIN COOLER TO COOL WATER FROM DISH WASHER, PRIOR TO DRAINING INTO FLOOR SINK.

PLUMBING FLOOR PLAN - DWV

1
P1.0

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

20-12-2023 20:31:15

1
P1.1

PLUMBING ROOF PLAN - DWV

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

KEYNOTES:

15.300 PROVIDE 1/2" FILTERED WATER WITH SHUT OFF TO ICE MAKER WITH BACKFLOW PREVENTER PER SPECIALTY PLUMBING FIXTURE SCHEDULE. MOUNT RUN-OUT 60" A.F.F.

15.301 ROUTE 1/2" FILTERED WATER TO TEA BREWER WITH SHUT OFF VALVE AND BACKFLOW PREVENTER PER SPECIALTY PLUMBING FIXTURE SCHEDULE. MOUNT RUN-OUT 24" A.F.F.

15.302 PROVIDE COLD WATER TO OWNER PROVIDED WATER FILTRATION SYSTEM, MOUNT TOP OF FILTER AT 7'6" A.F.F.

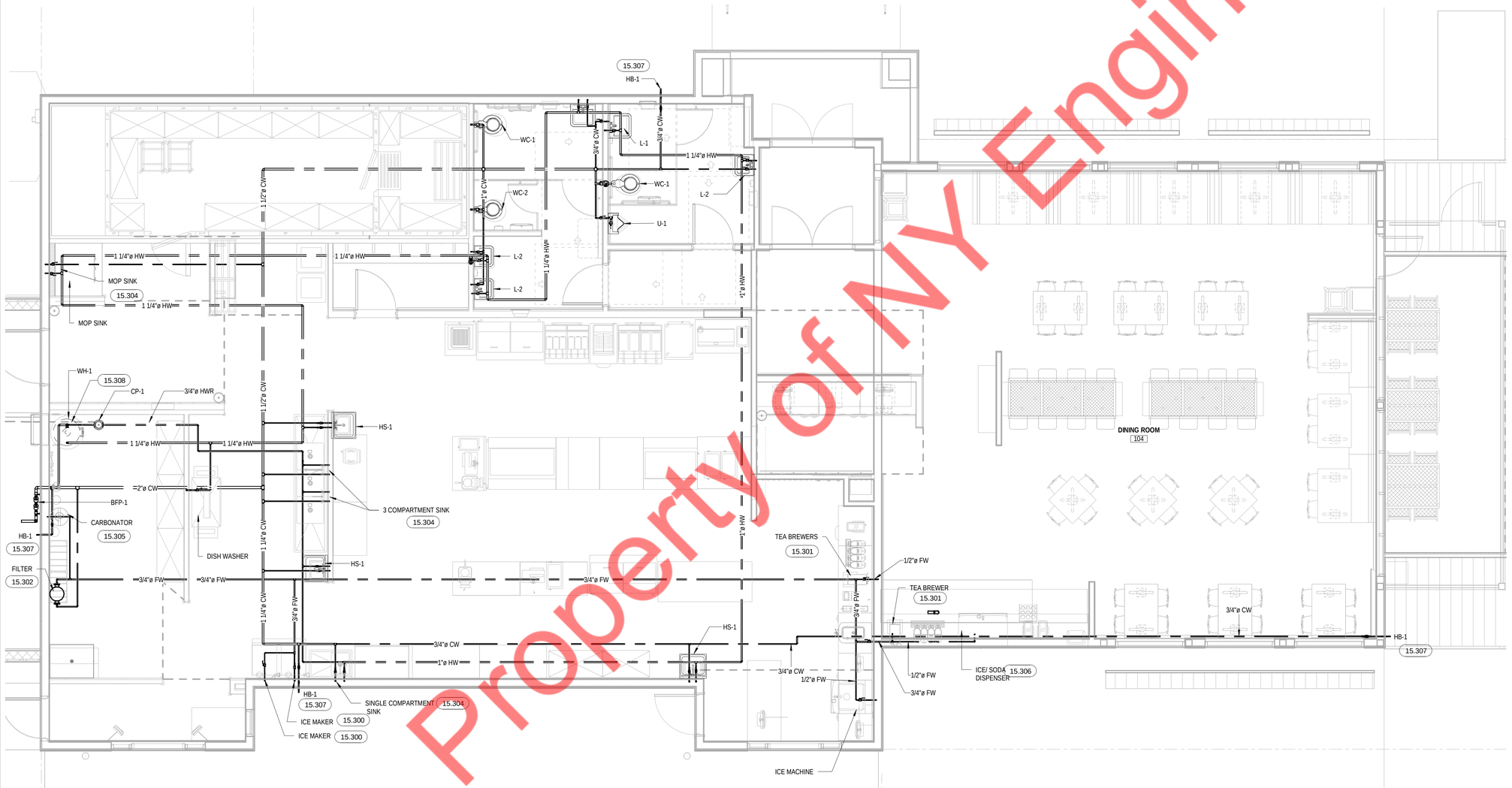
15.304 SUPPLY PURE FORCE SANITIZING UNIT WITH AHJ APPROVED BACKFLOW PREVENTION

15.305 PROVIDE 1/2" FILTERED WATER WITH SHUT OFF TO CARBONATOR WITH BACKFLOW PREVENTER PER SPECIALTY PLUMBING FIXTURE SCHEDULE. NO COPPER DOWNSTREAM OF BP. MOUNT RUN-OUT 72" A.F.F.

15.306 PROVIDE 1/2" FILTERED WATER WITH SHUT OFF TO SODA DISPENSER ICE MAKER WITH BACKFLOW PREVENTER PER SPECIALTY PLUMBING FIXTURE SCHEDULE. INSTALL PER MANUFACTURERS REQUIREMENTS. MOUNT RUN-OUT 60" A.F.F.

15.307 DROP 3/4" COLD WATER DOWN. ROUTE THROUGH CABINET TO HB-1. MOUNT 18" A.F.F.

15.308 FOR WATER HEATER DETAIL, SEE 4/P4.0.



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P2.0

PLUMBING FLOOR PLAN - WATER

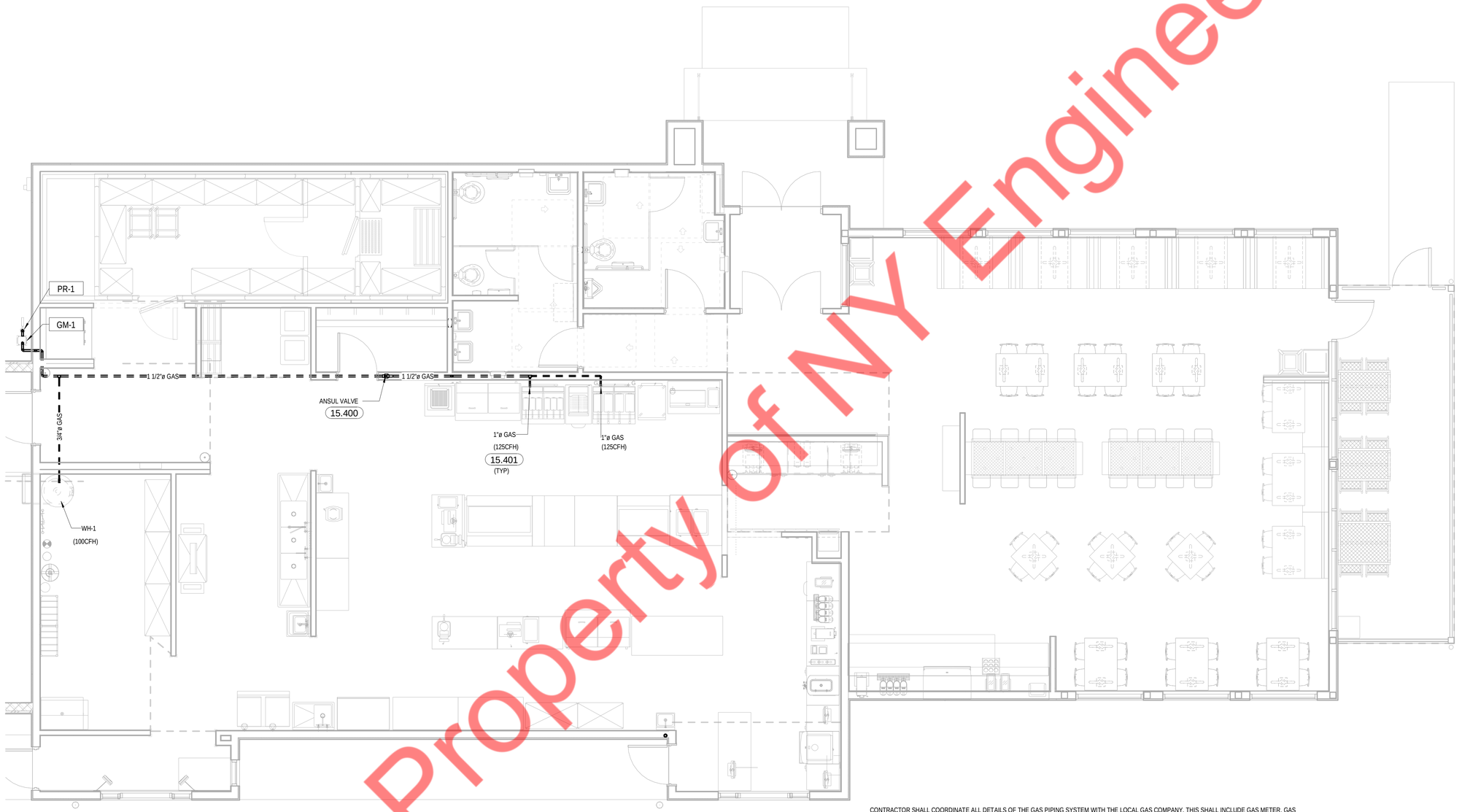
SCALE: 1/4" = 1' - 0"

20-12-2023 20:31:21

KEYNOTES:

15.400 EMERGENCY GAS SHUTOFF VALVE IN ACCESSIBLE LOCATON. CAPTIVE AIR PROVIDED WITH HOOD AND EQUIPMENT.

15.401 ALL GAS PIPING FITTINGS CONCEALED IN WALL SHALL BE OF WELDED CONSTRUCTON OR FITTINGS LISTED FOR CONCEALED INSTALLATION.



CONTRACTOR SHALL COORDINATE ALL DETAILS OF THE GAS PIPING SYSTEM WITH THE LOCAL GAS COMPANY. THIS SHALL INCLUDE GAS METER, GAS REGULATOR AND GAS PRESSURE REQUIREMENTS METER AND SERVICE REGULATOR TO BE PROVIDED AND INSTALLED BY UTILITY COMPANY. VERIFY CORRECT GAS PRESSURE DOWNSTREAM OF SERVICE REGULATOR AFTER GAS UTILITY COMPLETES INSTALLATION. THE NATURAL GAS DEMAND SHOWN IN MBH IS BASED ON A HEATING VALUE OF 1000 BTU (1 MBH) PER CUBIC FOOT, A SPECIFIC GRAVITY OF 0.6, AND ON PRIMARY EQUIPMENT INDICATED ON PLANS. GAS PIPING SIZES SHALL BE NOTED AS ON PLANS.

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P2.1

PLUMBING FLOOR PLAN - GAS

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

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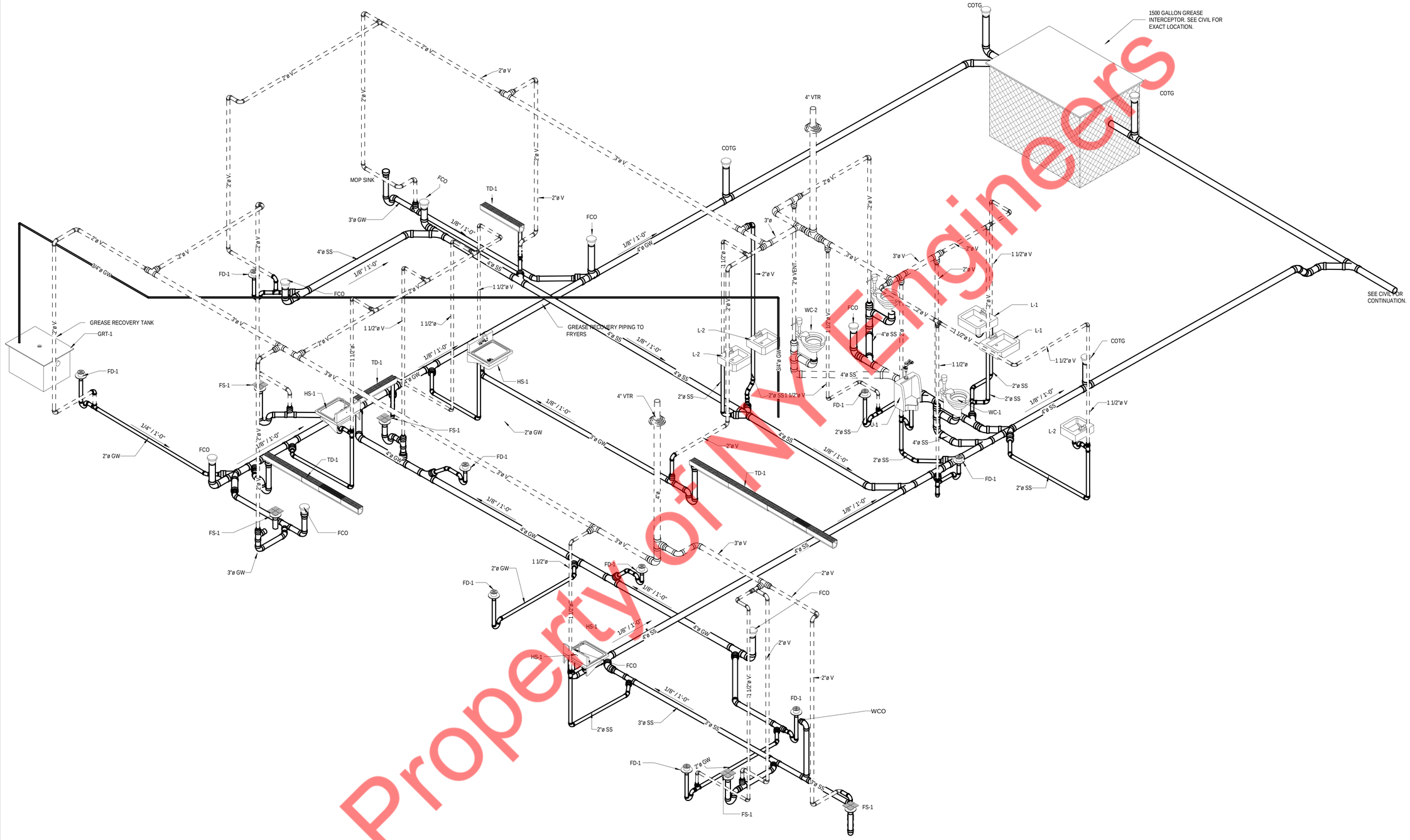

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P3.0

PLUMBING ISOMETRIC - DWV

SCALE: NO SCALE

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KEYNOTES:

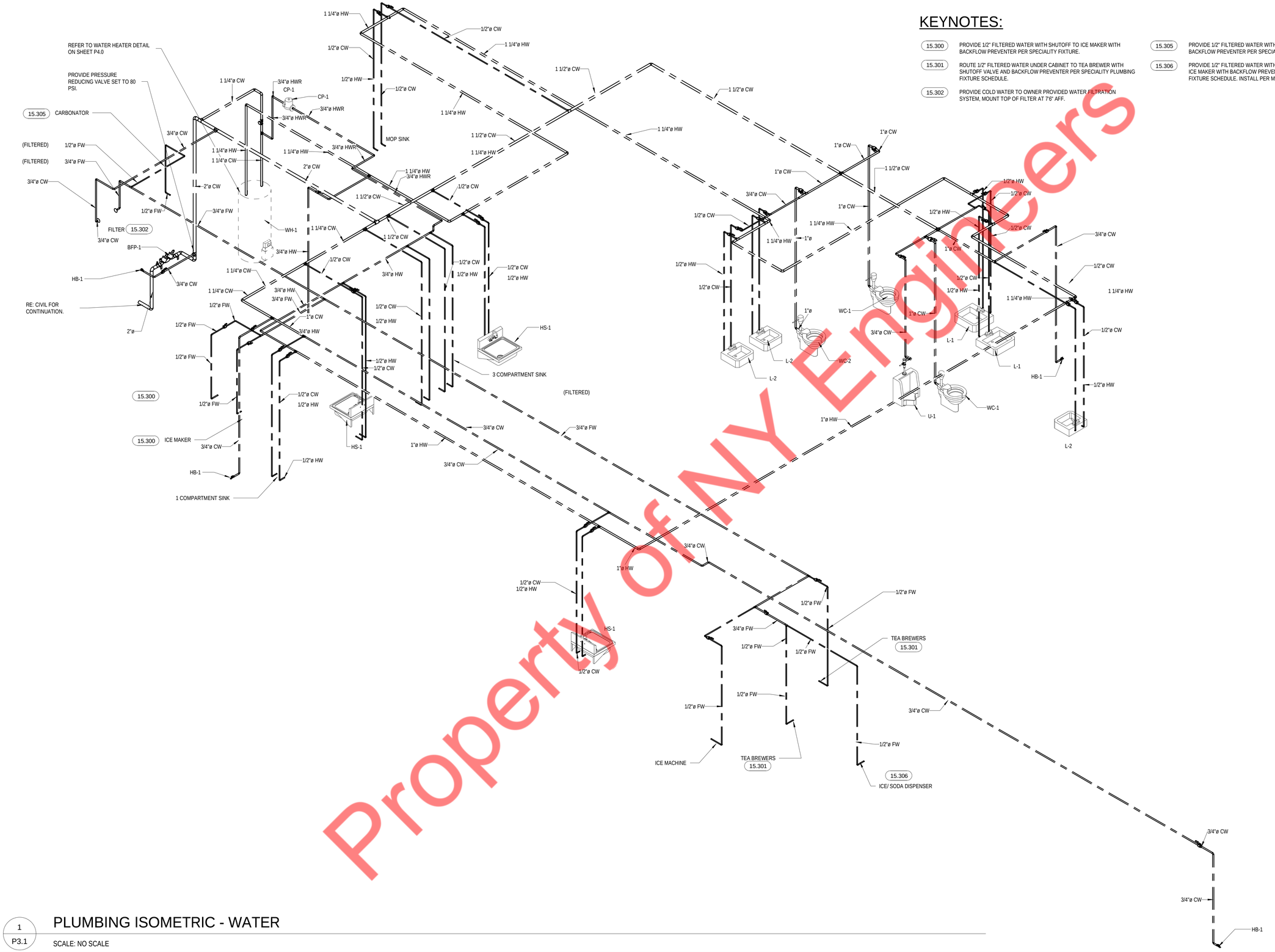
15.300 PROVIDE 1/2" FILTERED WATER WITH SHUTOFF TO ICE MAKER WITH BACKFLOW PREVENTER PER SPECIALITY FIXTURE.

15.301 ROUTE 1/2" FILTERED WATER UNDER CABINET TO TEA BREWER WITH SHUTOFF VALVE AND BACKFLOW PREVENTER PER SPECIALITY PLUMBING FIXTURE SCHEDULE.

15.302 PROVIDE COLD WATER TO OWNER PROVIDED WATER FILTRATION SYSTEM, MOUNT TOP OF FILTER AT 7'6" AFF.

15.305 PROVIDE 1/2" FILTERED WATER WITH SHUT OFF TO CARBONATOR WITH BACKFLOW PREVENTER PER SPECIALITY FIXTURE SCHEDULE.

15.306 PROVIDE 1/2" FILTERED WATER WITH SHUT OFF TO SODA DISPENSER / ICE MAKER WITH BACKFLOW PREVENTER PER SPECIALITY PLUMBING FIXTURE SCHEDULE. INSTALL PER MANUFACTURER REQUIREMENTS.



1 P3.1

PLUMBING ISOMETRIC - WATER

SCALE: NO SCALE

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GAS EQUIPMENT TABLE			
SYMBOL	EQUIPMENT	GAS INPUT (BTUH)	GAS LOAD (CFH)
1	FRYER	125,000	125
2	FRYER	125,000	125
3	WATER HEATER	100,000	100
	TOTAL	350,000	350
NOTE: LENGTH REPRESENTS DISTANCE FROM EQUIPMENT TO PRESSURE REGULATOR.			
VERIFY WITH OWNER FINAL UNIT SELECTION			
NATURAL DELIVERY PRESSURE 7-9" W.C. MINIMUM			

GAS PIPE SYSTEM CALCULATIONS; PER 2020 FFGC SCHED. 40 METAL PIPE, PRESSURE LESS THEN 2 PSI WITH PRESSURE DROP OF 0.5 IN. W.C., S.G. 0.60.

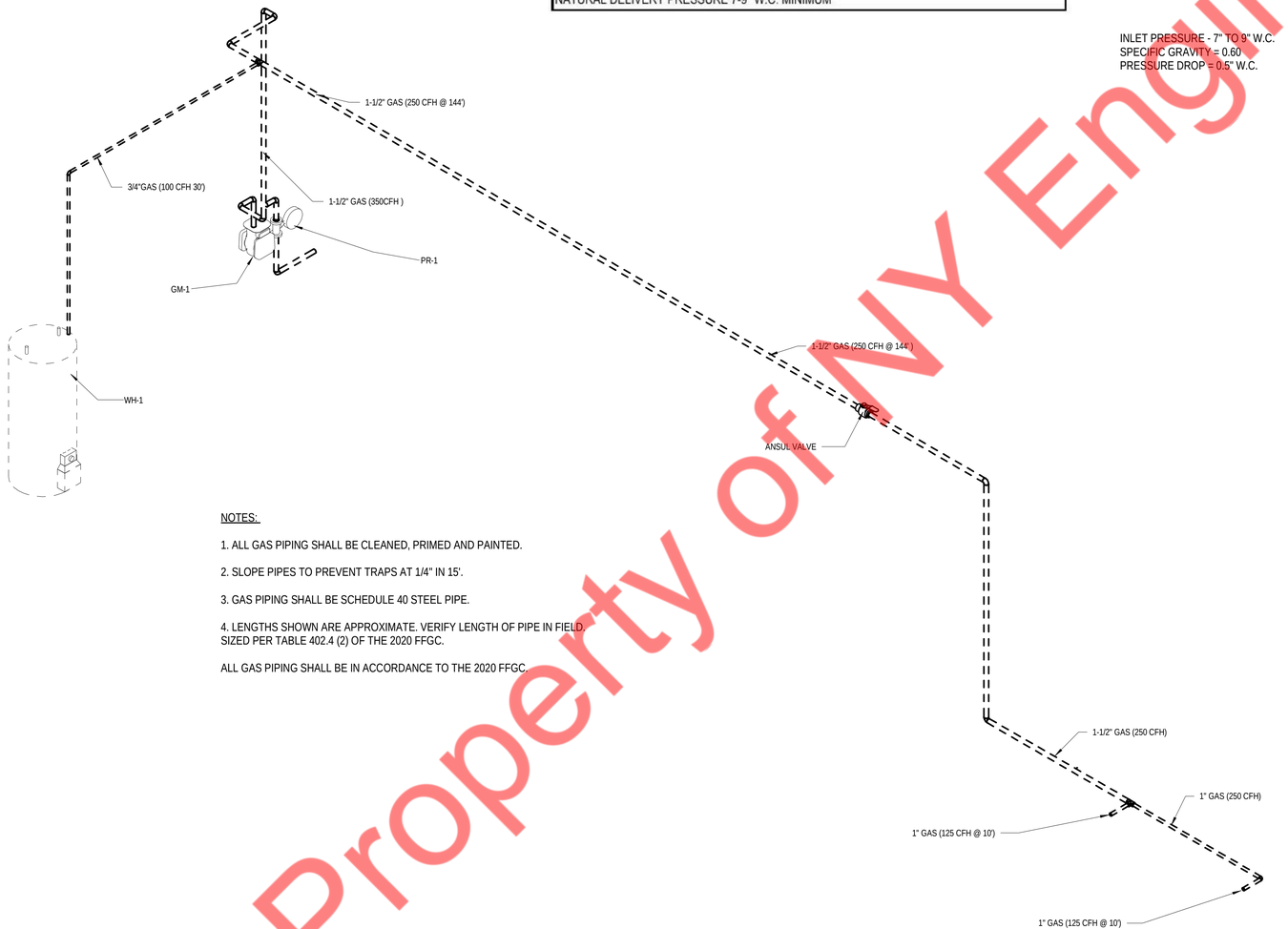
LONGEST LENGTH METHOD FROM GAS METER TO FARTHEST DEVICE (FRYER)

EQUIV. LF	DESCRIPTION
60	ACTUAL PIPE LENGTH
44	VALVES: 2 SHUT OFF VALVE
24	ELBOWS: 6 ELBOWS
16	TEES: 2 TEES
144	**TOTAL EQUIVALENT LENGTH IN FEET**

PIPE SIZE	DESCRIPTION	CFH
1-1/2"	FIRST PIPE SECTION WITH 2 TEE'S	250
3/4"	SECOND PIPE SECTION (TO WATER HEATER)	100

INLET PRESSURE - 7" TO 9" W.C.
SPECIFIC GRAVITY = 0.60
PRESSURE DROP = 0.5" W.C.

NOTE:
EACH ABOVE GROUND PORTION OF GAS PIPING SYSTEM SHALL BE CONTINUOUS BONDED & GROUNDED PER 2020 FFGC 309 & 310



NOTES:

1. ALL GAS PIPING SHALL BE CLEANED, PRIMED AND PAINTED.

2. SLOPE PIPES TO PREVENT TRAPS AT 1/4" IN 15'.

3. GAS PIPING SHALL BE SCHEDULE 40 STEEL PIPE.

4. LENGTHS SHOWN ARE APPROXIMATE. VERIFY LENGTH OF PIPE IN FIELD. SIZED PER TABLE 402.4 (2) OF THE 2020 FFGC.

ALL GAS PIPING SHALL BE IN ACCORDANCE TO THE 2020 FFGC.

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P3.2

PLUMBING ISOMETRIC - GAS

SCALE: NO SCALE

2020 FLORIDA PLUMBING CODE
SECTION 1106.2

4" VERTICAL = 180 GPM
6" HORIZONTAL @ 1/4" / FT. = 487 GPM

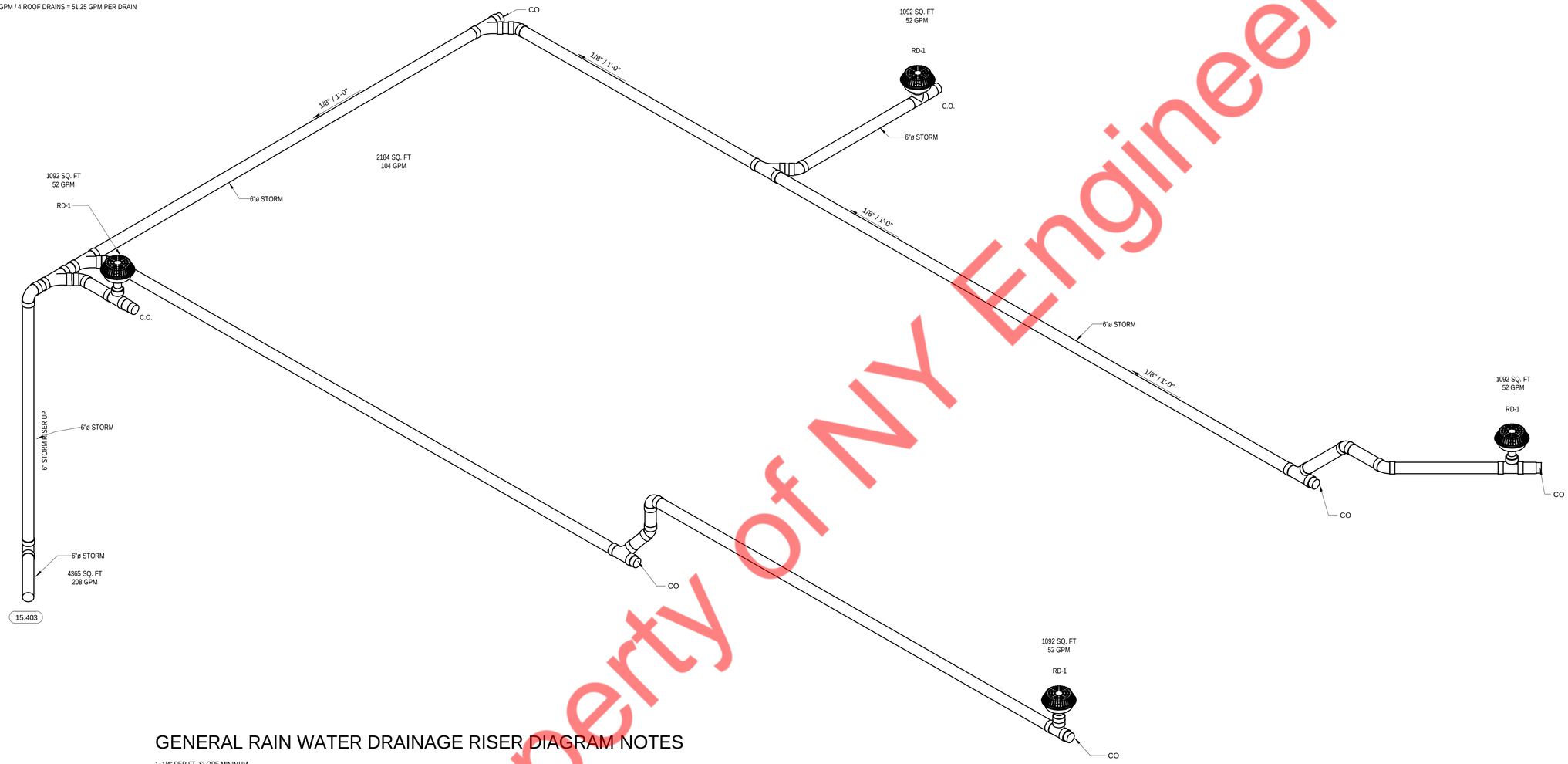
RAINFALL = 4.5", 100 YEAR STORM, 1 HOUR

4365 SQ. FT. x 4.5 IN/HR / 60 / 12 = 27.3 ft3 x 7.5 GAL = 205 GPM

205 GPM / 4 ROOF DRAINS = 51.25 GPM PER DRAIN

KEYNOTES:

15.403 REFER TO CIVIL FOR CONTINUATION OF STORM PIPING. MAINTAIN A MINIMUM 30" COVER.



GENERAL RAIN WATER DRAINAGE RISER DIAGRAM NOTES

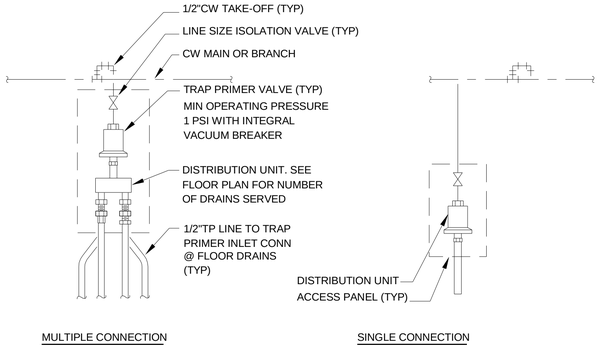
1. 1/4" PER FT. SLOPE MINIMUM
2. ALL BENDS SHALL BE AT 45 DEG. MAX.
INSULATION SHALL BE 1/2" THICK WITH WHITE ALL SERVICE JACKET AND VAPOR BARRIER

1
P3.3

PLUMBING ISOMETRIC - STORM

SCALE: NO SCALE

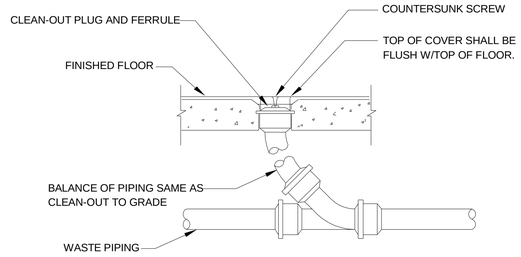
20-12-2023 20:31:32



TRAP PRIMER DETAIL

NO SCALE

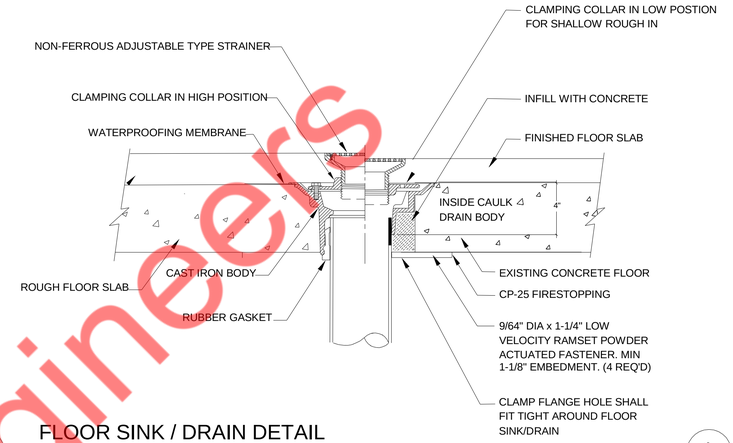
6



FLOOR CLEAN-OUT DETAIL

NO SCALE

4



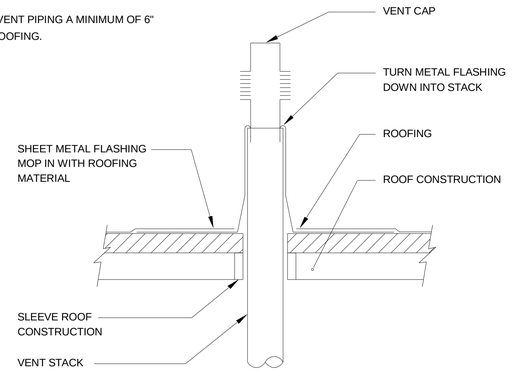
FLOOR SINK / DRAIN DETAIL

NO SCALE

1

NOTES:

EXTEND VENT PIPING A MINIMUM OF 6" ABOVE ROOFING.



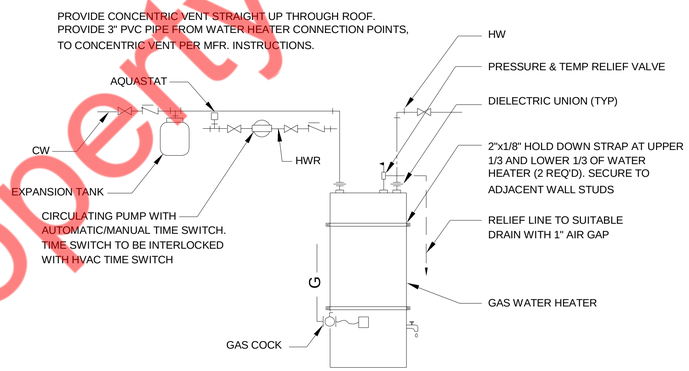
VENT THRU ROOF DETAIL

NO SCALE

2

NOTES:

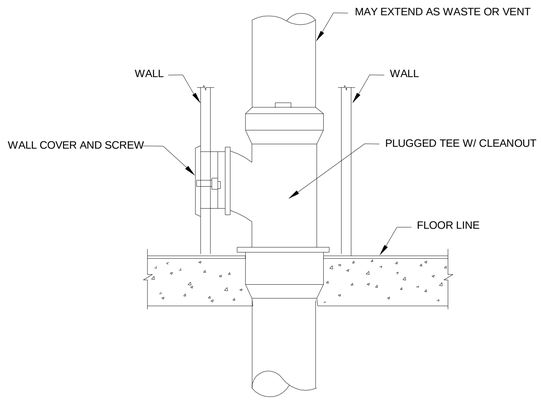
PROVIDE CONCENTRIC VENT STRAIGHT UP THROUGH ROOF. PROVIDE 3" PVC PIPE FROM WATER HEATER CONNECTION POINTS, TO CONCENTRIC VENT PER MFR. INSTRUCTIONS.



WATER HEATER DETAIL

NO SCALE

5



WALL CLEAN-OUT

NO SCALE

3