

EXISTING CONDITION NOTES

STOP AND READ  
THE CONTRACTOR AND SUB CONTRACTOR SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED. WHEN DEMOLITION IS REQUIRED, THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS- BOTH HORIZONTAL AND VERTICAL, ELECTRICAL SERVICE/PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY. OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAINED ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

SCOPE OF WORK

THE SPACE IS TO BE CONDITIONED BY REUSING EXISTING TWO 10.0 TON ELECTRIC HEAT ROOF TOP UNITS WITH ALL NEW DUCTWORK ALONG WITH NECESSARY ACCESSORIES AS SHOWN IN THE PLAN.

KITCHEN IS TO BE PROVIDED WITH NEW VENTILATION SYSTEM INCLUDING EXHAUST HOOD, KITCHEN EXHAUST FAN AND MAKE UP AIR FAN. BOTH KITCHEN EXHAUST FAN AND MAKE UP AIR FAN ARE LOCATED AT THE ROOF.

TOILETS ARE TO BE VENTILATED VIA CEILING MOUNTED TOILET EXHAUST FANS

THE VILLAGES, FL BUILDING DEPARTMENT NOTES

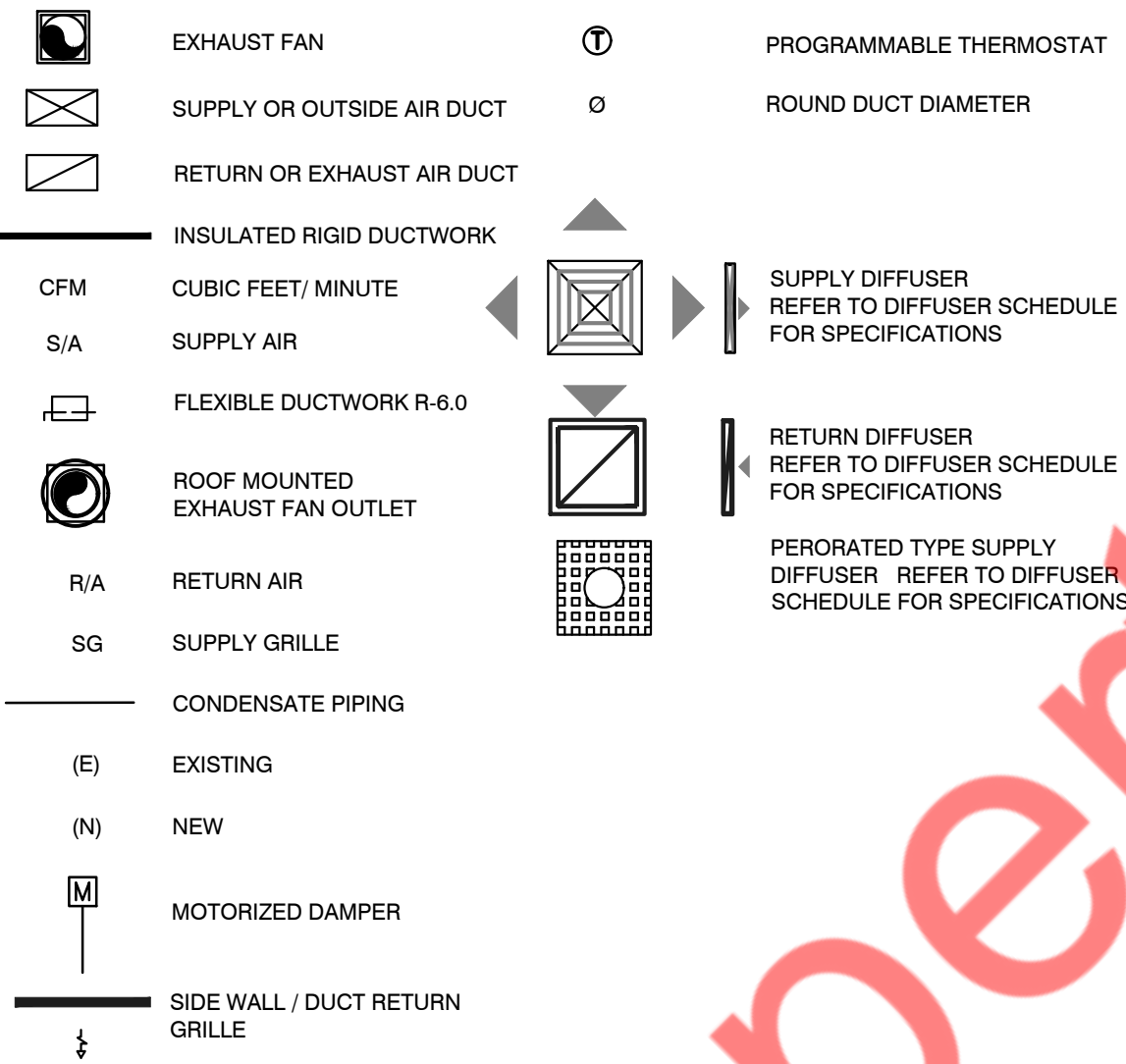
ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE 2023 FLORIDA BUILDING CODE 8<sup>TH</sup> EDITION, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

- ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
- VENTILATION FOR ALL AREA SHALL COMPLY WITH 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION, CHAPTER 4.
- THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.
- TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION:
  - VENTILATION SYSTEM BALANCING - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 403.3
- THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
  - STANDARDS OF HEATING - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 309.1
  - DUCT CONSTRUCTION AND INSTALLATION - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 603
  - AIR INTAKES, EXHAUSTS AND RELIEF - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 401.5
  - AIR FILTERS - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 605
  - MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION - 606
- MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
- A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2023 FLORIDA MECHANICAL CODE 8<sup>TH</sup> EDITION CHAPTER 403.3
- REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
- THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED METHOD. CONTRACTOR TO SUBMIT THE AIR - BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.

GENERAL NOTES

- CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.
- CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
- DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL TRADES.
- COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
- DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURERS STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.
- ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
- USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.
- VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECTS OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.
- ALL A/C AND FRESH AIR ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL RECTANGULAR DUCTS OVER CEILINGS MAY BE SHEET METAL WITH EXTERNAL INSULATION AND ALL EXPOSED ROUND SHEET METAL DUCTS SHALL BE INTERNALLY INSULATED.
- G.C. SHALL CONTRACT LANDLORD-APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.
- IF APPLICABLE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR KITCHEN VENTILATION SYSTEM INCLUDING TYPE 1 HOOD AND FOR THE WALK-IN COOLER & FREEZER.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

MECHANICAL SYMBOLS



MECHANICAL PLAN NOTES

- REUSE EXISTING TWO 10. TONS ELECTRIC HEAT ROOF TOP UNITS. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES AS SHOWN IN THE PLAN. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO A/C UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.
- FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF U.L. 268A. INTERLOCKED TO SHUTDOWN A/C UNIT UPON DETECTION OF SMOKE. IF NECESSARY PROVIDE SMOKE DETECTOR WITH AN ANNUNCIATOR, ALARM AND POWER L.E.D.'S FOR VISIBLE AND AUDIBLE ALARM SIGNAL AND VISIBLE TROUBLE SIGNAL. MOUNT ANNUNCIATOR ON ROOM SIDE OF CEILING.
- ALL DUCTS SHALL BE MINIMUM 26 GAUGE SHEET METAL WITH EXTERNAL DUCT WRAP INSULATION FOR CONCEALED DUCTS AND ALL EXPOSED DUCTS WITH INTERNAL INSULATION. ALL DUCTS TO BE MANUFACTURED AND INSTALLED ACCORDING TO ASHRAE AND SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A
- FACTORY-MADE FLEXIBLE AIR DUCTS AND CONNECTORS SHALL BE NOT MORE THAN 5 FEET IN LENGTH AND SHALL NOT BE USED IN LIEU OF RIGID ELBOW OR FITTINGS. FLEXIBLE AIR DUCTS SHALL BE PERMITTED TO BE USED AS AN ELBOW AT A TERMINAL DEVICE.
- THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. IF EXISTING THERMOSTAT AND REMOTE SENSOR ARE NOT REUSABLE THEN PROVIDE NEW THERMOSTAT WITH LOCKABLE COVER. COORDINATE LOCATION OF THERMOSTAT. PROVIDE REMOTE SENSOR LOCATED 72" ABOVE FINISHED FLOOR NEAR LOCATION INDICATED. SEAL WALL OPENINGS WITH CAULK. COORDINATE LOCATION ON SITE WITH GENERAL CONTRACTOR AND EQUIPMENT.
- ALL INDOOR DUCT AND PLENUM INSULATION SCHEDULE:
  - CONCEALED, RECTANGULAR, ROUND AND FLAT-OVAL SUPPLY-RETURN, OUTDOOR-AND EXHAUST-AIR DUCT AND AIR PLENUM INSULATION:
  - FLEXIBLE ELASTOMERIC, MINERAL-FIBER BLANKET, MINERAL-FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:

	SA PLENUM	RA PLENUM
UNCONDITIONED SPACES:	R-4.2	R-4.2
UNVENTED ATTIC ABOVE INSULATED CEILING:	R-6	R-4.2
EXTERIOR OF BUILDING:	R-6	R-4.2

- ALL SEAMS, JOINTS, ETC WILL BE SEALED TO MAKE AIR DUCT AIRTIGHT. PRESSURE SENSITIVE MATERIALS AND OTHERS APPROVED BY LATEST SMACNA. SEALING MATERIALS WILL BE USED.
- ALL EVAPORATOR UNITS SHALL HAVE A FLOAT SWITCH TO CONTROL OVERFLOW THAT WILL AUTOMATICALLY SHUT DOWN THE HVAC SYSTEM. THE DEVICE SHALL BE ATTACHED TO THE SECONDARY DRAIN OUTLET ON THE UNIT.
- ALL CONDENSATE DRAINS WILL BE PVC FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST APPROVED PLACE OF DISPOSAL.
- ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.
- TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE WITH 2023 FBC - ENERGY CONSERVATION, 8TH EDITION, SECTION C408.2.2. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C), NATIONAL STANDARDS OR EQUIVALENT PROCEDURES.
- HANGER ATTACHMENTS TO THE STEEL STRUCTURE WILL BE RATED POWDER ACTUATED FASTENERS, "C" CLAMPS, WELDED STUDS, CLAMP HANGERS, JOIST CLAMPS OR OTHER METHODS RECOMMENDED BY SMACNA'S "METAL AND FLEXIBLE" STANDARDS, CHAPTER 4, AND WILL HAVE A MINIMUM SAFETY MARGIN OF 4:1. SUSPENDED FROM TOP CHORD OF JOISTS, NOTHING FROM DECK OR CROSS BRACING.
- ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
- PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS/SLABS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.
- COORDINATE ALL ROOF PENETRATION, CURB/ROOF RAIL LOCATION, ROOF EQUIPMENT WEIGHTS & DIMENSIONS WITH STRUCTURAL & ROOFING CONTRACTOR.

MECHANICAL ABBREVIATIONS

BD	BACK DRAFT DAMPER
CDS	CEILING DIFFUSER SUPPLY
CDR	CEILING DIFFUSER RETURN
CFM	CUBIC FEET OF AIR PER MINUTE
CD	CONDENSATE DRAIN
EER	ENERGY EFFICIENCY RATIO
SEER	SEASONAL ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
VD	VOLUME DAMPER
RTU	ROOF TOP UNIT
OA	OUTSIDE AIR
KEF	KITCHEN EXHAUST FAN
MUA	MAKE-UP AIR UNIT

OCCUPANCY CALCULATION PER 2023 FLORIDA MECHANICAL CODE, TABLE 403.3.1.1		
BAR	416 SQ. FT.	26 PEOPLE
DINING AREA	800 SQ. FT.	69 PEOPLE
PRIVATE DINING	342 SQ. FT.	29 PEOPLE
KITCHEN	271 SQ. FT.	8 PEOPLE
BACK OF THE HOUSE	482 SQ. FT.	3 PEOPLE
SERVICE AREA	232 SQ. FT.	2 PEOPLE
TOTAL		137 PEOPLE

VENTILATION REQUIREMENTS PER 2023 FLORIDA MECHANICAL CODE, TABLE 403.3.1.1		
OUTSIDE AIR CALCULATIONS		

BAR	416 SQ. FT. X 0.18 CFM/SQ. FT. + 26 PEOPLE X 7.5 CFM/PEOPLE =	269.9 CFM
DINING AREA	800 SQ. FT. X 0.18 CFM/SQ. FT. + 69 PEOPLE X 7.5 CFM/PEOPLE =	661.5 CFM
PRIVATE DINING	342 SQ. FT. X 0.12 CFM/SQ. FT. + 29 PEOPLE X 7.5 CFM/PEOPLE =	279.1 CFM
PASSAGE	99 SQ. FT. X 0.06 CFM/SQ. FT. =	5.9 CFM
KITCHEN	271 SQ. FT. X 0.12 CFM/SQ. FT. + 1 PEOPLE X 7.5 CFM/PEOPLE =	92.5 CFM
BACK OF THE HOUSE	482 SQ. FT. X 0.12 CFM/SQ. FT. + 3 PEOPLE X 7.5 CFM/PEOPLE =	77.9 CFM
STORAGE	40 SQ. FT. X 0.12 CFM/SQ. FT. =	4.8 CFM
SERVICE AREA	232 SQ. FT. X 0.12 CFM/SQ. FT. + 2 PEOPLE X 7.5 CFM/PEOPLE =	42.8 CFM
TOTAL OUTSIDE AIR REQUIRED		1434.5 CFM
TOTAL OUTSIDE AIR PROVIDED		1540 CFM

TOILET EXHAUST AIR CALCULATIONS		
RESTROOMS	NO OF FIXTURE(1) X 70 CFM/FIXTURE =	70 CFM
EXHAUST AIR REQUIRED FOR 4 RESTROOMS		70X4=280 CFM

AIR BALANCE		
RTU-30-T102A(E)		+800 CFM
RTU-30-T102B(E)		+940 CFM
MAU-1(N)		+3600 CFM
KXF-1(N)		-2200 CFM
KXF-2(N)		-2500 CFM
EF-1(N)		-70 CFM
EF-2(N)		-70 CFM
EF-3(N)		-70 CFM
EF-4(N)		-70 CFM
BUILDING PRESSURE		+160 CFM

ROOFTOP UNIT SCHEDULE		
UNIT TAG	RTU-30-T102A(E)	RTU-30-T102B(E)
UNIT TYPE	ELECTRIC HEAT	ELECTRIC HEAT
MANUFACTURER	CARRIER	CARRIER
MODEL	50 HC	50 HC

STATUS	EXISTING	EXISTING
LOCATION	ROOF	ROOF
TOTAL CAPACITY	10 TONS	10 TONS
TOTAL COOLING MBH	S.A.E.	S.A.E.
TOTAL SENSIBLE MBH	S.A.E.	S.A.E.
EER / SEER	S.A.E.	S.A.E.
ELECTRIC HEATER KW	24 (V.I.F.)	24 (V.I.F.)
ESP (IN OF WC)	S.A.E.	S.A.E.
THERMAL EFF.(%)	S.A.E.	S.A.E.
SUPPLY AIR (CFM)	4000	4000
OUTSIDE AIR (CFM)	600	940
VOLTAGE/PHASE/HZ	208/3/60(V.I.F.)	208/3/60(V.I.F.)
MCA (A)	97 (V.I.F)	97 (V.I.F)
MOCP (A)	100 (V.I.F)	100 (V.I.F)
WEIGHT (LBS)	S.A.E.	S.A.E.

- NOTES FOR RTU-1(E) & RTU-2(E)
- EXISTING RTUS WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
  - S.A.E. : SAME AS EXISTING. V.I.F. : VERIFY IN FIELD.
  - CONTRACTOR TO FIELD VERIFY IF ALL RTU ARE WORKING AT THEIR 100% RATED CAPACITIES / LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
  - CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
  - CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.
  - CONTRACTOR TO FIELD VERIFY & CONFIRM IF THE EXISTING RTUS ARE INSTALLED WITH INBUILT ELECTRIC HEATERS OF CAPACITY AS MENTIONED IN THE SCHEDULE. IF NOT REPORT BACK TO ENGINEER IN RECORD PRIOR STARTING ANY CONSTRUCTION / BASE BID.
  - CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKERS, DISCONNECT ETC. PRIOR TO ORDERING AND BID.

DIFFUSER SCHEDULE					
MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	A1	B	C	R
USE	SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETURN
MODEL	TDC-AA	TDC-AA	PAS	S300 FS	56FL
FL-15					
MOUNTING	SAT CEILING	HARD CEILING	SAT CEILING	DUCT MOUNTED	SAT CEILING
LOCATION	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
FACE SIZE	24" X 24"	12" X 12"	24" X 24"	AS SHOWN	24"X24"
NECK SIZE	REFER TABLE - A	REFER TABLE - A	REFER TABLE - A	-	-
FRAME TYPE	LAY IN	LAY IN	LAY IN	FLANGED	LAY IN
NOISE CRITERIA	<30	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	-
					CONTINUOUS PLENUM BOX /VOLUME DAMPER

- NOTES:
- MOUNTING FRAME TYPE SHALL BE COORDINATED WITH CEILING/ WALL CONSTRUCTION.
  - COORDINATE FINAL FINISH/COLOR WITH ARCHITECT/OWNER.
  - PROVIDE ROUND TO SQUARE NECK ADAPTOR.
  - PROVIDE 4 WAY AIR THROW PATTERN UNLESS NOTES OR INDICATED.
  - CABLE OPERATED DAMPERS SHALL BE PROVIDED FOR ANY DIFFUSERS/GRILLES INSTALLED IN THE HARD CEILING AREA.
  - LINEAR SLOT DIFFUSERS (MODEL - FL-15) SHALL BE 1.5" SLOT HIGH-THROW PATTERN, SINGLE-SLOT LINEAR DIFFUSERS, EQUIPPED WITH TITUS CONTINUOUS PLENUM.

FAN SCHEDULE			NECK SIZE TABLE - A
DESIGNATION	KXF-1(N)	KXF-2 (N)	
STATUS	NEW	NEW	EF-1 TO 4(N)
QUANTITY	1	1	4
MANUFACTURER	ECON-AIR	ECON-AIR	GREENHECK
MODEL	EADU85H	EADU180H	SP-LP0511-1
CFM & ESP	2200@ 1.2" IN. WC	2500@ 1.4" IN. WC	70@ 0.5" IN. WC
HP	1	1.5	-
FLA(AMPS)	6.9	6.6	0.29
WEIGHT (LBS)	130	220	15
VOLT/PH/HZ	208/1/60	208/3/60	115/1/60

- NOTES FOR KXF-1 & 2(N):
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
  - ROOF MOUNTED FANS
  - RESTAURANT MODEL
  - UL705 & UL762 & ULD-5645
  - REFER TO HOOD DETAILS SHEETS (M-6 TO M-8) FOR MORE DETAILS
  - THERMAL OVERLOAD PROTECTION
  - HIGH HEAT OPERATION 300°F (149° C)
  - GREASE CLASSIFICATION TESTING
  - NEMA 3R SAFETY DISCONNECT SWITCH
  - VARIABLE SPEED CONTROL.
  - INTERNAL WIRING.

- NOTES FOR EF-1 TO 4 (N)
- COORDINATE ELECTRICAL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
  - PROVIDE BACK DRAFT DAMPER.
  - EF-1 TO 4 SHALL BE INTERLOCKED WITH ROOM LIGHTS.

GREASE DUCT SPECIFICATIONS

- PROVIDE CLEAN OUT AT ALL ELBOWS AND BOTTOM OF RISER AND EVERY 20 FEET HORIZONTAL KITCHEN EXHAUST DUCT AND SHALL COMPLY ALL THE REQUIREMENTS PER 2023 FLORIDA MECHANICAL CODE 506.3.8 & 506.3.9.
- COMMERCIAL KITCHEN GREASE DUCTS SHALL BE DESIGNED FOR THE TYPE OF COOKING APPLIANCE AND HOOD SERVED. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE OF 16 GAUGE MINIMUM STEEL OR FACTORY FABRICATED GREASE DUCT WITH LISTED AND LABELED IN ACCORDANCE WITH UL 1978.
- JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE IF THE DUCT SYSTEMS.
- DUCT TO EXHAUST FAN CONNECTIONS SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET AND OUTLET OF THE FAN FOR INLINE FANS. APPROVED FLEXIBLE CONNECTIONS MAY BE PROVIDED.
- A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NON-COMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.
- PRIOR TO THE USE OR CONCEALMENT OF ANY PORTION OF A GREASE DUCT SYSTEM, A LEAKAGE TEST SHALL BE PERFORMED AS PER 2023 FLORIDA MECHANICAL CODE SECTION 506.3.2.5. DUCT SHALL BE CONSIDERED TO BE CONCEALED WHERE INSTALLED IN SHAFTS OR COVERED BY COATINGS OR WRAPS THAT PREVENT THE DUCTWORK FROM VISUALLY INSPECTED ON ALL SIDE. THE DUCT INSTALLER SHALL BE RESPONSIBLE FOR PROVIDING THE NECESSARY EQUIPMENT AND PERFORMING THE GREASE DUCT LEAKAGE TEST. THE DUCT LEAKAGE TEST SHALL BE PERFORMED FOR ALL THE DUCT SYSTEMS, INCLUDING THE DUCT-TO-DUCT CONNECTION. THE DUCTWORK SHALL BE PERMITTED TO BE TESTED IN SECTIONS, PROVIDED THAT EVERY JOINT IS TESTED (IF TEST IS FAILED, CONTRACTOR TO PROVIDE NEW KITCHEN EXHAUST DUCT).
- GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LADS WITHIN THE STREET LIMITATIONS OF THE 2023 FLORIDA BUILDING CODE. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
- A RESIDUE TRAP SHALL BE PROVIDED AT THE BASE OF EACH VERTICAL RISER WITH PROVISION FOR CLEANOUT IN ACCORDANCE WITH NFPA 96.
- CLEANOUT OPENINGS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION, WITHIN 3 FEET OF THE EXHAUST FAN.
- CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED WITH A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOOR ASSEMBLIES SHALL HAVE A GASKET OR SEALANT THAT IS NONCOMBUSTIBLE AND LIQUID TIGHT AND SHALL NOT HAVE FASTENERS THAT PENETRATED THE DUCT
- A GREASE DUCT SERVING THE TYPE-1 HOOD THAT PENETRATED A CEILING, WALL OR FLOOR SHALL BE ENCLOSED FROM THE FIRE POINT OF PENETRATION TO THE OUTLET TERMINAL. DUCT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN THAT OF THE ASSEMBLY PENETRATED AND NOT LESS THAN 1 HOUR. FIRE DAMPERS AND SMOKE DAMPERS SHALL NOT BE INSTALLED IN GREASE DUCTS.
- GREASE DUCTS CONSTRUCTED IN ACCORDANCE WITH SECTION 506.3.1 SHALL BE ENCLOSED BY A LISTED AND LABELED FIELD-APPLIED GREASE DUCT ENCLOSURE MATERIAL. SYSTEMS, PRODUCT, OR METHOD OF CONSTRUCTION SPECIFICALLY EVALUATED FOR SUCH PURPOSE IN ACCORDANCE WITH ASTM E2336. FIELD APPLIED GREASE DUCT ENCLOSURE SHALL COMPLY ALL REQUIREMENTS PER 2023 FLORIDA MECHANICAL CODE SECTION 506.3.11.2.

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

HVAC NOTES &  
SCHEDULES

M-1



**THERMOSTATIC CONTROLS**

- A. C403.2.4.1 THERMOSTATIC CONTROLS  
 THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.
- EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:
1. THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
  2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.
- B. C403.2.4.1.2 DEADBAND  
 WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.
- EXCEPTIONS:
2. THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
  3. OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.
- C. C403.2.4.1.3 SETPOINT OVERLAP RESTRICTION  
 WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.2.4.1.2.
- D. C403.2.4.2 OFF-HOUR CONTROLS  
 EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.
- EXCEPTIONS:
1. ZONES THAT WILL BE OPERATED CONTINUOUSLY.
  2. ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A READILY ACCESSIBLE MANUAL SHUTOFF SWITCH.
- E. C403.2.4.2.1 THERMOSTATIC SETBACK CAPABILITIES.  
 THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).
- F. C403.2.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES  
 AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.
- G. C403.2.4.2.3 AUTOMATIC AND OPTIMUM START CAPABILITIES (MANDATORY)  
 AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.
- INDIVIDUAL HEATING AND COOLING SYSTEMS WITH SETBACK CONTROLS AND DIRECT DIGITAL CONTROL SHALL HAVE OPTIMUM START CONTROLS. THE CONTROL ALGORITHM SHALL, AS A MINIMUM, BE A FUNCTION OF THE DIFFERENCE BETWEEN SPACE TEMPERATURE AND OCCUPIED SET POINT, THE OUTDOOR TEMPERATURE, AND THE AMOUNT OF TIME PRIOR TO SCHEDULED OCCUPANCY. MASS RADIANT FLOOR SLAB SYSTEMS SHALL INCORPORATE FLOOR TEMPERATURE INTO THE OPTIMUM START ALGORITHM.

AIR CURTAIN SCHEDULE

TAG	ACH-1(N)	ACH-2(N)	ACH-3(N)	ACH-4(N)
MANUFACTURER	MARS (OR EQUIVALENT)	MARS (OR EQUIVALENT)	MARS (OR EQUIVALENT)	MARS (OR EQUIVALENT)
MODEL	LPV260-1UA-OB	LPV272-1UA-OB	LPV248-1UA-OB	LPV260-1UA-OB
QUANTITY	1	1	1	1
NOZZLE LENGTH (IN.)	60"	72"	48"	60"
AIR VOLUME (CFM)	1500	1800	1200	1500
MOTOR HP * NO. OF MOTORS	½	½	½	½
AMPS	2.6	2.6	2.4	2.6
V/PH/Hz	115/1/60	115/1/60	115/1/60	115/1/60

- NOTES:
1. CO-ORDINATE WITH ARCHITECT/OWNER FOR FINAL MOUNTING, FRAME TYPE, PAINT AND FINISH.
  2. PROVIDE MANUFACTURER RECOMMENDED ACCESSORIES.
  3. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENT.

MAKEUP AIR UNIT SCHEDULE

TAG	MAU-1(N)
UNIT	GAS HEAT
MANUFACTURER	ECON-AIR
MODEL	EA2-D.250-20D
STATUS	NEW
MOUNTING	ROOF
TONNAGE	-
TOTAL COOLING CAPACITY	-
SENSIBLE COOLING CAPACITY	-
SEER	-
HEATING (IN)	146.823 MBH
HEATING (OUT)	135.077 MBH
THERMAL EFF(%)	92%
SUPPLY AIR (CFM)	3600
ESP	0.5 IN. WC.
HP	2.0
VOLTAGE	208/3/60
FLA	8.3
MCA (A)	10.4
MOCP (A)	15
WEIGHT (lbs)	775

- MAU-1 (N):
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN.
  2. INTAKE HOOD WITH EZ FILTERS.
  3. REFER SHEETS M-6 TO M-8 FOR MORE DETAILS.

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
 PROFESSIONAL ENGINEER  
 STATE OF FLORIDA

ISSUE DATE: 05.30.25  
 PROJECT #: 299F.1284F  
 DRAWN BY: NYE  
 CHECKED BY: NYE

HVAC NOTES &  
 SCHEDULES

M-1.1



GENERAL NOTES

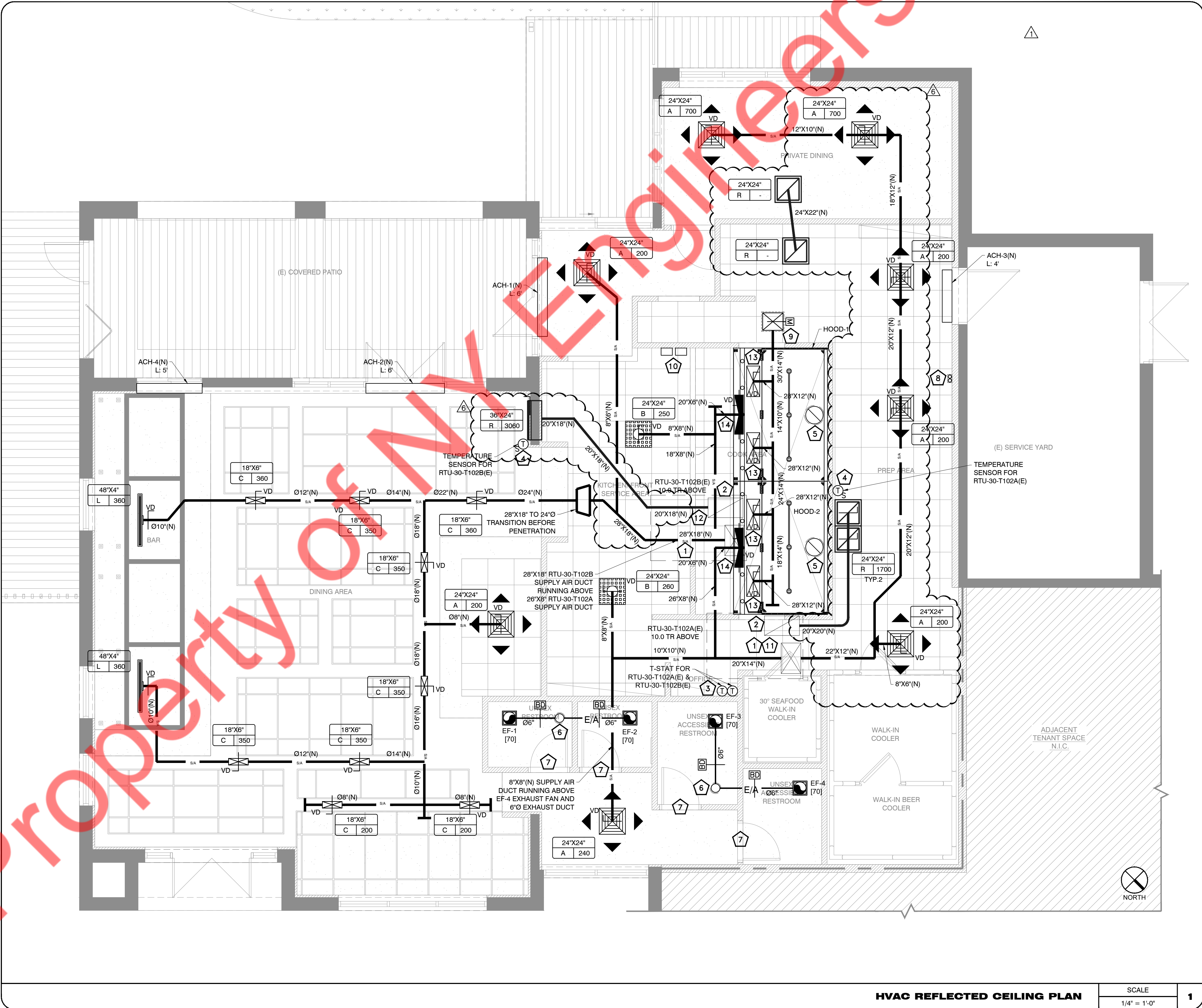
- A. CONTRACTOR SHALL BALANCE EACH DEVICE WITH THE CFM SHOWN ON PLAN.
- B. NEW DUCTWORK SHOWN ON PLAN ARE SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR PIPING AND DUCTWORK ROUTING. OFFSET AND RUN PIPING, DUCTWORK INSIDE THE STRUCTURE IF REQUIRED. PROVIDE ANY EXTRA PIPING, DUCTWORK, FITTINGS, INSULATIONS AND OTHER ACCESSORIES IN ORDER TO COMPLETE THE INSTALLATION.
- C. COORDINATE LOCATIONS AND SIZES OF INTAKE & EXHAUST OPENINGS WITH OWNER AND RESPECTIVE ENGINEER.
- D. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED. VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.
- E. DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.
- F. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
- G. CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
- H. COORDINATE WITH ALL TRADES FOR MATERIALS IN RATED AND PLENUM SPACES.
- I. ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.
- J. MOUNT DUCTWORK AS HIGH AS POSSIBLE.
- K. TEST AND BALANCE AIR SYSTEMS. PROVIDE REPORT TO G.C AND OWNER.
- L. NEW DUCTWORK IN CONCEALED AREAS MAY BE RECTANGULAR WITH EQUIVALENT CROSS SECTIONAL FLOW AREA.
- M. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FIRE RATINGS OF THE WALLS.
- N. ARCHITECTURAL LAYOUT AND DIMENSIONS FOR EQUIPMENT TO TAKE PRECEDENCE OVER MEP.
- O. LIMIT FLEXIBLE DUCT LENGTH TO 5 LINEAR FEET. MAKE SURE DUCT IS FULLY STRETCHED OUT WITH NO KINKS & SHARP BENDS.
- P. PROVIDE CORD OPERATED DAMPER IN INACCESSIBLE CEILING.
- Q. PROVIDE INTERNAL INSULATION FOR ALL EXPOSED DUCTWORK AND EXTERNAL FOR ALL DUCTWORK IN CONCEALED AREAS.

KEYED NOTES

1. EXTEND FULL SIZE SUPPLY AND RETURN DUCTWORK FROM EXISTING ROOFTOP UNIT TO SPACE. EXTEND AS SHOWN. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND SIZE.
2. EXISTING SMOKE DETECTOR TO REMAIN AND REUSED. IF NOT FOUND OR NOT REUSABLE, PROVIDE SMOKE DETECTOR IN SUPPLY DUCT TO SHUT DOWN CORRESPONDING UNIT UNDER ALARM CONDITIONS. ALL WIRING SHALL BE IN CONDUIT PER NRC SMOKE DETECTOR SHALL BE SYSTEM SENSOR MODEL DH100ACDCLP.
3. RELOCATE THE EXISTING THERMOSTAT AT OFFICE SPACE AT SHOWN LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. PROVIDE LOCKABLE COVER.
4. PROVIDE NEW REMOTE TEMPERATURE SENSOR AT SHOWN LOCATION. AVOID LOCATING NEAR DIRECT SOURCE OF HEAT. CONFIRM FINAL LOCATION OF TEMPERATURE SENSOR WITH ARCHITECT/CLIENT.
5. KITCHEN EXHAUST HOODS (HOOD-1 & 2) WITH 16"Ø EXHAUST DUCT GOING TO FAN LOCATED ON ROOF. CONTRACTOR TO FIELD VERIFY THE EXACT DUCT ROUTING AND FAN LOCATION. DUCT SHALL BE SLOPED 1/4" UNIT, VERTICAL IN 12" UNIT HORIZONTAL. TOWARD HOOD. PROVIDE WITH CONTROLS PANEL & ANSUL SYSTEM AS PER MANUFACTURERS RECOMMENDATIONS. REFER SHEET M-6 FOR MORE DETAILS.
6. Ø8" TOILET EXHAUST DUCT UP TO ROOF. ARCHITECT TO PROVIDE 10"Ø ROOF CUTOUT FOR THE EXHAUST DUCT GOING UP.
7. PROVIDE 1/2" DOOR UNDERCUT.
8. 3"Ø WATER HEATER (HWHT-1) COMBUSTION AIR INTAKE & FLUE VENT PIPING GOING TO ROOF. ARCHITECT TO PROVIDE 8"X4" ROOF CUTOUT FOR THE COMBUSTION AIR INTAKE AND VENTING DUCT GOING UP. REFER PLUMBING DRAWINGS FOR EXACT HWHT-1 LOCATION. CONTRACTOR TO FOLLOW MANUFACTURERS RECOMMENDATIONS FOR ALL DIRECT VENTING OPTIONS FOR HWHT-1.
9. 18"X16" MAU-1 DUCT GOING UP. ARCHITECT TO PROVIDE 20" X18" ROOF CUTOUT FOR THE EXHAUST DUCT GOING UP. INTERLOCK MOTORIZED DAMPER WITH MAU-1 OPERATION. MAKE 18"X16" TO 30"X14" DUCT TRANSITION AS CLOSE TO SLAB AS POSSIBLE.
10. HOOD-1 & 2 MANUAL PULL STATION FOR ANSUL FIRE SUPPRESSION SYSTEM. CONTRACTOR TO MAKE SURE THAT THE PULL STATION IS INSTALLED IN EGRESS PATH WITHOUT ANY OBSTACLES AT EASY TO ACCESS HEIGHT FROM FLOOR.
11. TERMINATE 32"X18" RETURN AIR DUCT FROM RTU-30-T102A(E) ABOVE CEILING WITH WMS.
12. CONNECT 18"X20" RETURN AIR DUCT TO EXISTING 32"X18" RETURN AIR DUCT FROM RTU-30-T102B(E).
13. MAKE UP UNIT SUPPLY AIR OF 825 CFM EACH DIRECTLY CONNECTED TO HOOD PLENUM CONNECTION. CONTRACTOR TO MODIFY DUCT ROUTE IF NEEDED.
14. RTU-30-T102A(E) SUPPLY AIR OF 625 CFM EACH DIRECTLY CONNECTED TO PLENUM CONNECTION. CONTRACTOR TO MODIFY DUCT ROUTE IF NEEDED.

KITCHEN EXHAUST NOTES

1. PROVIDE CLEAN OUT AT ALL ELBOWS AND BOTTOM OF RISER AND EVERY 15 FEET HORIZONTAL KITCHEN EXHAUST DUCT.
2. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE DESIGNED FOR THE TYPE-1 OF COOKING APPLIANCE AND HOOD SERVED.
3. IF NOT PROVIDED FACTORY FABRICATED THEN KITCHEN EXHAUST DUCT SHALL BE CONSTRUCTED OF 0.1046-INCH NO.16 GAUGE STEEL OR 0.0450-INCH NO. 18 STAINLESS STEEL.
4. JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID TIGHT WELD OR BRAZE MADE IN THE EXTERNAL SURFACE IF THE DUCT SYSTEMS.
5. DUCT TO EXHAUST FAN CONNECTIONS SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET OF THE FAN FOR SIDE-INLET UTILITY FANS. APPROVED FLEXIBLE CONNECTIONS MAY BE PROVIDED.
6. A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NON-COMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.
7. GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LOADS WITHIN THE STREET LIMITATIONS. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
8. THE CLEANOUTS FOR HORIZONTAL GREASE DUCT SHALL BE LOCATED ON THE SIDE OF THE DUCT WITH THE OPENING NOT LESS THAN 1.5' ABOVE THE BOTTOM OF THE DUCT AND NOT LESS THAN 1" BELOW THE TOP OF THE DUCT.
9. GREASE DUCT SHALL BE PERMITTED TO BE ENCLOSED IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE REQUIREMENT FOR SHAFT CONSTRUCTION. SUCH GREASE DUCT SYSTEM AND EXHAUST EQUIPMENT SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION NOT LESS THAN 18 INCHES AND SHALL HAVE A CLEARANCE TO NONCOMBUSTIBLE CONSTRUCTION AND GYPSUM WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES OF NOT LESS THAN 6 INCHES.
10. PROVIDE 2 LAYERS OF 1.5" FIRE WRAP AROUND KITCHEN EXHAUST GREASE DUCTS.
11. PROVIDE MANUAL PULL STATION IN EGRESS PATH IN CASE OF EMERGENCY FOR SHUTTING OFF HOOD AND FANS.



HVAC REFLECTED CEILING PLAN

SCALE

1/4" = 1'-0"

1

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

HVAC REFLECTED  
CEILING PLAN

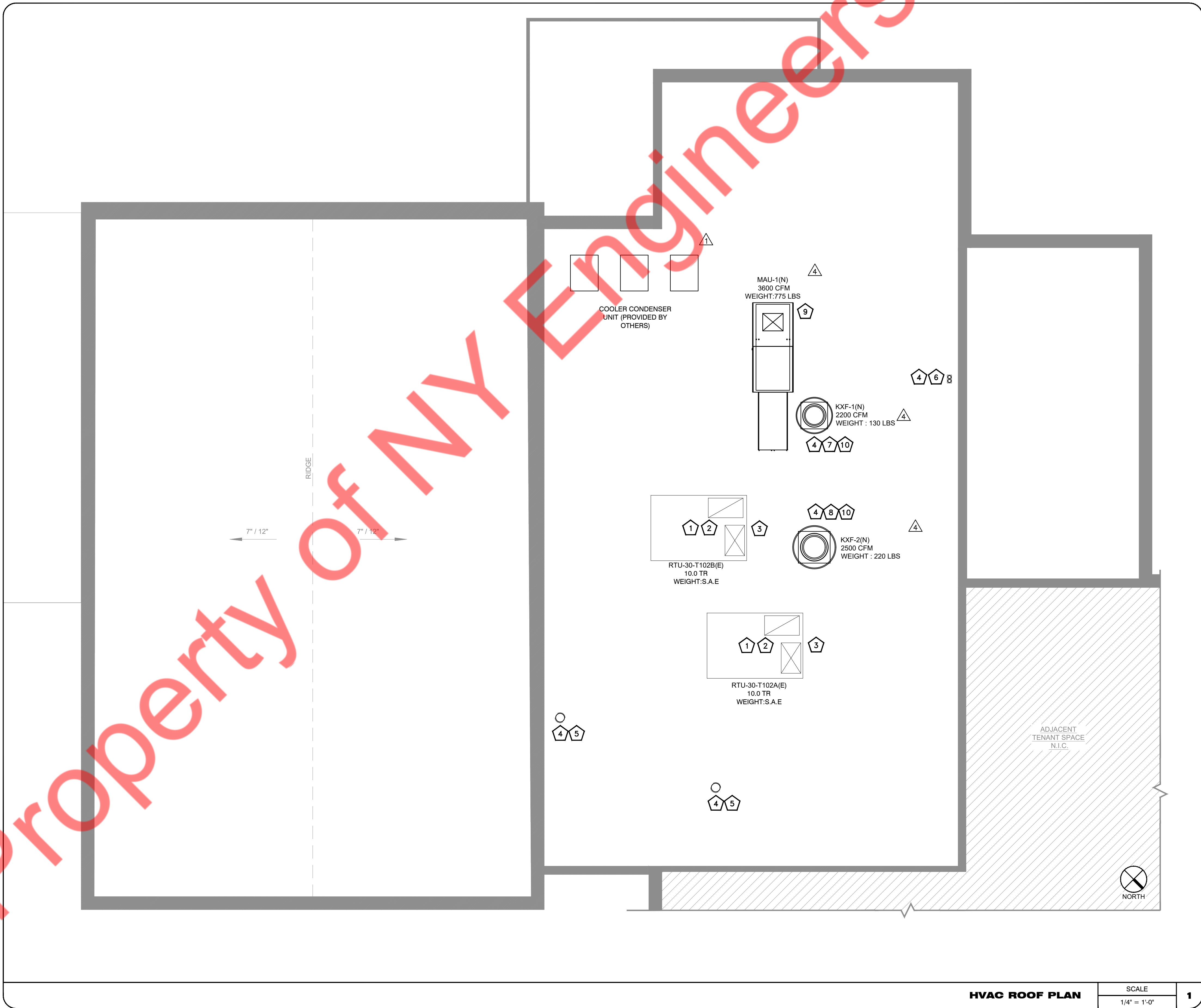


#### GENERAL NOTES

- COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND STRUCTURAL ENGINEERS.
- EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.
- CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
- ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.
- PATCH THE EXTRA PENETRATIONS AS & IF REQUIRED OR CUT AN EXTRA PORTION OF THE ROOF IF EXISTING PENETRATION IS NOT FEASIBLE/WORKABLE. COORDINATE WITH ROOFING AND MECHANICAL CONTRACTOR.
- EXHAUST SHALL TERMINATE 3 FEET FROM THE PROPERTY LINE, 3 FEET FROM THE EXTERIOR WALL AND ROOFS, 3 FEET FROM THE OPERABLE OPENING INTO THE BUILDING AND 10 FEET FROM THE OUTSIDE AIR INTAKE OPENINGS.
- MATERIAL FROM EXISTING SYSTEM WHICH IS RENDERED USELESS SHALL BE REMOVED AND DISPOSED OF OFF SITE.
- CONTRACTOR TO FIELD VERIFY & CONFIRM IF THE EXISTING RTU'S ARE INSTALLED WITH INBUILT ELECTRIC HEATERS OF CAPACITY AS MENTIONED IN THE SCHEDULE. IF NOT REPORT BACK TO ENGINEER IN RECORD PRIOR STARTING ANY CONSTRUCTION / BASE BID.
- ALL PROPOSED ROOF PENETRATIONS ARE TO BE PERFORMED BY THE LANDLORD'S ROOFER AT THE TENANT'S EXPENSE.

#### KEY NOTES

- EXISTING RTU ALONG WITH ALL ITS ACCESSORIES TO REMAIN AND TO BE REUSED. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION ON SITE. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING.
- CONTRACTOR TO SET OUTSIDE AIR AS INDICATED ON RTU SCHEDULE. CONTRACTOR SHALL SCRIBE INTO UNIT POSITION OF OUTSIDE AIR DAMPER AND LABEL OUTSIDE AIR VOLUME AND PERCENTAGE OF OUTSIDE AIR. CONTRACTOR TO PROVIDE OUTSIDE AIR INTAKE ON RTU IF NOT FOUND. VERIFY IN FIELD PRIOR TO BID.
- ENSURE THAT THE EXISTING CONDENSATE DRAINS OF BOTH EXISTING RTU'S ARE OF APPROVED MATERIAL AND ARE TERMINATED AT APPROVED PLACE OF DISPOSAL AS PER LOCAL CODES. CONDENSATE DRAIN TO REMAIN AS IT IS FOR BOTH THE EXISTING RTU. CONTRACTOR TO FLUSH AND CLEAN EXISTING DRAIN. CONTRACTOR TO REPAIR/REPLACE WITH SIMILAR KIND IF FOUND DAMAGED.
- ALL EXHAUST TERMINATIONS SHALL BE TERMINATED AT-LEAST 10' HORIZONTALLY AWAY OR 3' VERTICALLY ABOVE ALL OUTSIDE AIR INTAKE OPENINGS AND 10' FEET HORIZONTALLY AWAY FROM LOT LINES. CONTRACTOR TO FIELD VERIFY EXACT TERMINATION POINT ON SITE.
- 08" EXHAUST AIR DUCT FROM FIRST FLOOR. TERMINATE WITH GOOSENECK AND BIRD SCREEN. MAINTAIN MINIMUM 10'-0" DISTANCE FROM ANY OUTSIDE AIR INTAKE SOURCE.
- 3"Ø COMBUSTION AIR INTAKE & FLUE VENT PIPING FOR HOT WATER HEATER WH-1 COMING FROM FLOOR BELOW.
- KXF-1(N) SHALL BE INTERLOCKED WITH HOOD-1 OPERATIONS.
- KXF-2(N) SHALL BE INTERLOCKED WITH HOOD-2 OPERATIONS.
- MAU-1(N) SHALL BE INTERLOCKED WITH HOOD 1 & 2 OPERATION. MAU-1(N) SHALL BE PROVIDED WITH VARIABLE SPEED OPTION DEPENDING UPON THE NUMBER OF HOODS OPERATING AT AN INSTANCE.
- EXHAUST SYSTEM SHALL BE PROVIDED WITH GREASE CLEANOUTS AND GREASE GUARD SYSTEM. REFER SHEET M-1 HVAC NOTES & SCHEDULES FOR GREASE DUCT SPECIFICATIONS.



#### REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

HVAC ROOF PLAN

M-2.1





HANGER STRAP 1'  
(MIN) WIDE 22  
GAUGE

A diagram of a rectangular block with a dashed line indicating a cross-section. The block is shown in a 3D perspective, with a dashed line on the front face indicating a cross-section. The cross-section is labeled with a dimension of 27".

### HANGER SPACING AND EXTENSION 3" WIDE CHANNELS

DUCT SUPPORTS  
NOT TO SCALE





System Checksums

By Trial

RTU-30-T102A

Single Zone

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 8 / 19					Mo/Hr: Sum of					Mo/Hr: Heating Design					Cooling Heating		
Outside Air: OADB/WB/HR: 86 / 76 / 123					OADB: Peaks					OADB: 37					SADB	57.3	76.2
															Ra Plenum	76.6	71.3
															Return	76.5	71.3
															Ret/OA	77.9	66.2
															Fn MtrTD	0.0	0.0
															Fn BldTD	0.0	0.0
															Fn Frict	0.0	0.0
															AIRFLOWS		
Space	Plenum	Net	Percent	Space	Percent	Space Peak	Coil Peak	Percent				Cooling	Heating				
Sens. + Lat.	Sens. + Lat	Total	Of Total	Sensible	Of Total	Space Sens	Tot Sens	Of Total									
Btu/h	Btu/h	Btu/h	(%)	Btu/h	(%)	Btu/h	Btu/h	(%)									
Envelope Loads					Envelope Loads					Envelope Loads							
Skylite Solar	0	0	0	0	0	0	0	0.00				Diffuser	3,689	3,689			
Skylite Cond	0	0	0	0	0	0	0	0.00				Terminal	3,689	3,689			
Roof Cond	0	3,763	3,763	3	0	0	-1,820	4.45				Main Fan	3,689	3,689			
Glass Solar	13,656	0	13,656	12	21,031	29	0	0.00				Sec Fan	0	0			
Glass/Door Cond	2,261	0	2,261	2	1,301	2	-7,107	17.37				Nom Vent	540	540			
Wall Cond	6,809	2,256	9,064	8	6,241	9	-4,334	14.15				AHU Vent	540	540			
Partition/Door	0	0	0	0	0	0	0	0.00				Infil	58	83			
Floor	0	0	0	0	0	0	-2,355	5.75				MinStop/Rh	0	0			
Adjacent Floor	0	0	0	0	0	0	0	0				Return	3,654	3,675			
Infiltration	3,818	3,818	3	770	1	-3,219	-3,219	7.87				Exhaust	506	526			
Sub Total ==>	26,543	6,019	32,562	29	29,343	40	-17,015	49.59				Rm Exh	92	96			
Internal Loads					Internal Loads					Internal Loads					Auxiliary	0	0
Lights	4,432	1,108	5,540	5	4,383	6	0	0.00				Leakage Dwn	0	0			
People	15,497	0	15,497	14	8,010	11	0	0.00				Leakage Ups	0	0			
Misc	30,447	0	30,447	27	30,374	42	0	0.00				ENGINEERING CKS					
Sub Total ==>	50,376	1,108	51,484	46	42,766	59	0	0.00				% OA	14.6	14.6			
Ceiling Load	669	-669	0	0	578	1	-313	0.00				cfm/ft²	2.72	2.72			
Ventilation Load	0	0	28,382	25	0	0	0	51.45				cfm/ton	396.98				
Adj Air Trans Heat	0	0	0	0	0	0	0	0				ft²/ton	146.15				
Dehumid. Ov Sizing	0	0	0	0	0	0	0	0.00				Btu/hr·ft²	82.11	-30.14			
Ov/Undr Sizing	0	0	0	0	0	0	0	-1.04				No. People	40				
Exhaust Heat	0	-924	-924	-1	0	0	0	0.00									
Sup. Fan Heat	0	0	0	0	0	0	0	0.00									
Ret. Fan Heat	0	0	0	0	0	0	0	0.00									
Duct Heat Pkup	0	0	0	0	0	0	0	0.00									
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	0.00									
Supply Air Leakage	0	0	0	0	0	0	0	0.00									
Grand Total ==>	77,589	5,533	111,504	100.00	72,687	100.00	-17,328	100.00									
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION							
Total Capacity		Sens Cap.	Coil Airflow	Enter DB/WB/HR			Leave DB/WB/HR			Gross Total	Glass	Capacity	Coil Airflow	Ent	Lvg		
ton	MBh	MBh	cfm	°F	°F	gr/lb	°F	°F	gr/lb		ft² (%)	MBh	cfm	°F	°F		
Main Clg	9.3	111.5	77.8	3,689	78.0	65.3	73.5	57.3	55.5	63.3	Floor	1,358	-40.9	3,689	66.2	76.2	
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Part	0	0.0	0	0.0	0.0	
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	Int Door	0	0.0	0	0.0	0.0	
											ExFlr	92					
Total	9.3	111.5									Roof	1,358	0.0	0	0.0	0.0	
											Wall	1,436	0.0	0	0.0	0.0	
											Ext Door	30	-40.9				

Project Name: ZUNZIBAR-THE VILLAGES  
Dataset Name: THE VILLAGES.TRC

TRACE® 700 v6.3.3 calculated at 05:23 PM on 11/14/2024  
Alternative - 1 System Checksums Report Page 1 of 2

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

HVAC HEAT LOAD  
SUMMARY  
(1 OF 2)

M-4



System Checksums  
By Trial

RTU-30-T102B

Single Zone

COOLING COIL PEAK					CLG SPACE PEAK					HEATING COIL PEAK					TEMPERATURES		
Peaked at Time: Mo/Hr: 8 / 14					Mo/Hr: Sum of					Mo/Hr: Heating Design					Cooling Heating		
Outside Air: OADB/WB/HR: 91 / 77 / 119					OADB: Peaks					OADB: 37					SADB	46.8	80.3
Space Sens. + Lat.	Plenum Sens. + Lat.	Net Total	Percent Of Total		Space Sensible	Percent Of Total				Space Peak Space Sens	Coil Peak Tot Sens	Percent Of Total			Ra Plenum	77.8	70.7
Btu/h	Btu/h	Btu/h	(%)		Btu/h	(%)				Btu/h	Btu/h	(%)			Return	77.8	70.7
Envelope Loads					Envelope Loads					Envelope Loads					Ret/OA	86.3	49.6
Skylite Solar	0	0	0	0	0	0	0	Skylite Solar	0	0	0	0.00			Fn MtrTD	0.0	0.0
Skylite Cond	0	0	0	0	0	0	0	Skylite Cond	0	0	0	0.00			Fn BldTD	0.0	0.0
Roof Cond	0	3,535	3,535	3	0	0	0	Roof Cond	0	-1,906	3.70				Fn Frict	0.0	0.0
Glass Solar	4,968	0	4,968	4	6,744	14	0	Glass Solar	0	0	0.00						
Glass/Door Cond	2,225	0	2,225	2	1,981	4	0	Glass/Door Cond	-5,292	-5,292	10.28						
Wall Cond	4,170	1,340	5,510	5	4,732	10	0	Wall Cond	-3,313	-4,406	8.56						
Partition/Door	0	0	0	0	0	0	0	Partition/Door	0	0	0.00						
Floor	0	0	0	0	0	0	0	Floor	-1,786	-1,786	3.47						
Adjacent Floor	0	0	0	0	0	0	0	Adjacent Floor	0	0	0						
Infiltration	1,190	1,190	1,190	1	794	2	0	Infiltration	-2,954	-2,954	5.74						
Sub Total ==>	12,554	4,875	17,429	14	14,251	30	0	Sub Total ==>	-13,345	-16,344	31.75						
Internal Loads					Internal Loads					Internal Loads					AIRFLOWS		
Lights	4,982	1,245	6,227	5	4,829	10	0	Lights	0	0	0.00				Diffuser	1,510	1,510
People	43,109	0	43,109	36	19,960	42	0	People	0	0	0.00				Terminal	1,510	1,510
Misc	7,510	0	7,510	6	7,280	15	0	Misc	0	0	0.00				Main Fan	1,510	1,510
Sub Total ==>	55,600	1,245	56,845	47	32,069	68	0	Sub Total ==>	0	0	0.00				Sec Fan	0	0
Ceiling Load	1,277	-1,277	0	0	1,025	2	0	Ceiling Load	-620	0	0.00				Nom Vent	940	940
Ventilation Load	0	0	49,219	41	0	0	0	Ventilation Load	0	-36,655	71.21				AHU Vent	940	940
Adj Air Trans Heat	0	0	0	0	0	0	0	Adj Air Trans Heat	0	0	0				Infil	64	76
Dehumid. Ov Sizing	0	0	0	0	0	0	0	Ov/Undr Sizing	0	0	0.00				MinStop/Rh	0	0
Ov/Undr Sizing	0	0	0	0	0	0	0	Exhaust Heat	0	1,524	-2.96				Return	1,574	1,586
Exhaust Heat	0	-2,992	-2,992	-2	0	0	0	OA Preheat Diff.	0	0	0.00				Exhaust	1,004	1,016
Sup. Fan Heat	0	0	0	0	0	0	0	RA Preheat Diff.	0	0	0.00				Rm Exh	0	0
Ret. Fan Heat	0	0	0	0	0	0	0	Additional Reheat	0	0	0.00				Auxiliary	0	0
Duct Heat Pkup	0	0	0	0	0	0	0	Underflr Sup Ht Pkup	0	0	0.00				Leakage Dwn	0	0
Underflr Sup Ht Pkup	0	0	0	0	0	0	0	Supply Air Leakage	0	0	0.00				Leakage Ups	0	0
Supply Air Leakage	0	0	0	0	0	0	0	Grand Total ==>	-13,965	-51,474	100.00				ENGINEERING CKS		
Grand Total ==>	69,431	1,852	120,502	100.00	47,344	100.00	0								% OA	62.3	62.3
COOLING COIL SELECTION					AREAS					HEATING COIL SELECTION					cfm/ft²	1.04	1.04
Total Capacity	ton	MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB/WB/HR °F °F gr/lb	Leave DB/WB/HR °F °F gr/lb		Gross Total	Glass ft² (%)	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F	ft²/ton	150.37		
Main Clg	10.0	120.5	64.5	1,510	86.1 72.9 101.1	46.8 46.7 47.3		Floor	1,448	-51.5	1,510	49.6	80.3	Btu/hr·ft²	144.20		
Aux Clg	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0		Part	0	0.0	0	0.0	0.0	No. People	83.22	-35.55	
Opt Vent	0.0	0.0	0.0	0	0.0 0.0 0.0	0.0 0.0 0.0		Int Door	0	0.0	0	0.0	0.0				
								ExFlr	70								
Total	10.0	120.5						Roof	1,448	0	0						
								Wall	1,063	224	21						
								Ext Door	45	45	100						
										-51.5							

Project Name: ZUNZIBAR-THE VILLAGES  
Dataset Name: THE VILLAGES.TRC

TRACE® 700 v6.3.3 calculated at 05:23 PM on 11/14/2024  
Alternative - 1 System Checksums Report Page 2 of 2

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

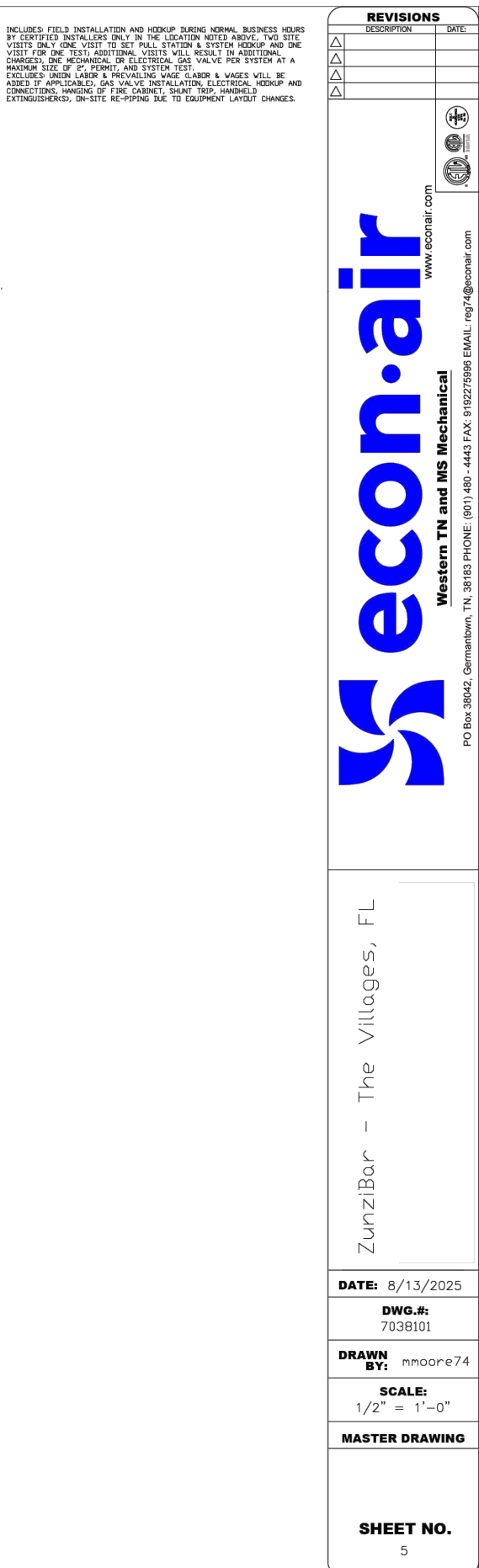
HVAC HEAT LOAD  
SUMMARY  
(2 OF 2)

M-5









ers

The logo for econ·air is displayed in blue, featuring a stylized 'e' and 'a' followed by the text 'econ·air'. Below the logo, the company name 'Western TN and MS Mechanical' is written in a smaller font. Further down, the address 'PO Box 1042, Germantown, TN 38103-0042' and phone/fax numbers '615-481-4444' and '615-481-4444' are listed. The website 'www.econair.com' is also provided.

ZundBar - The Villages, FL

DATE: 8/13/2025

DWG.#:  
7339002

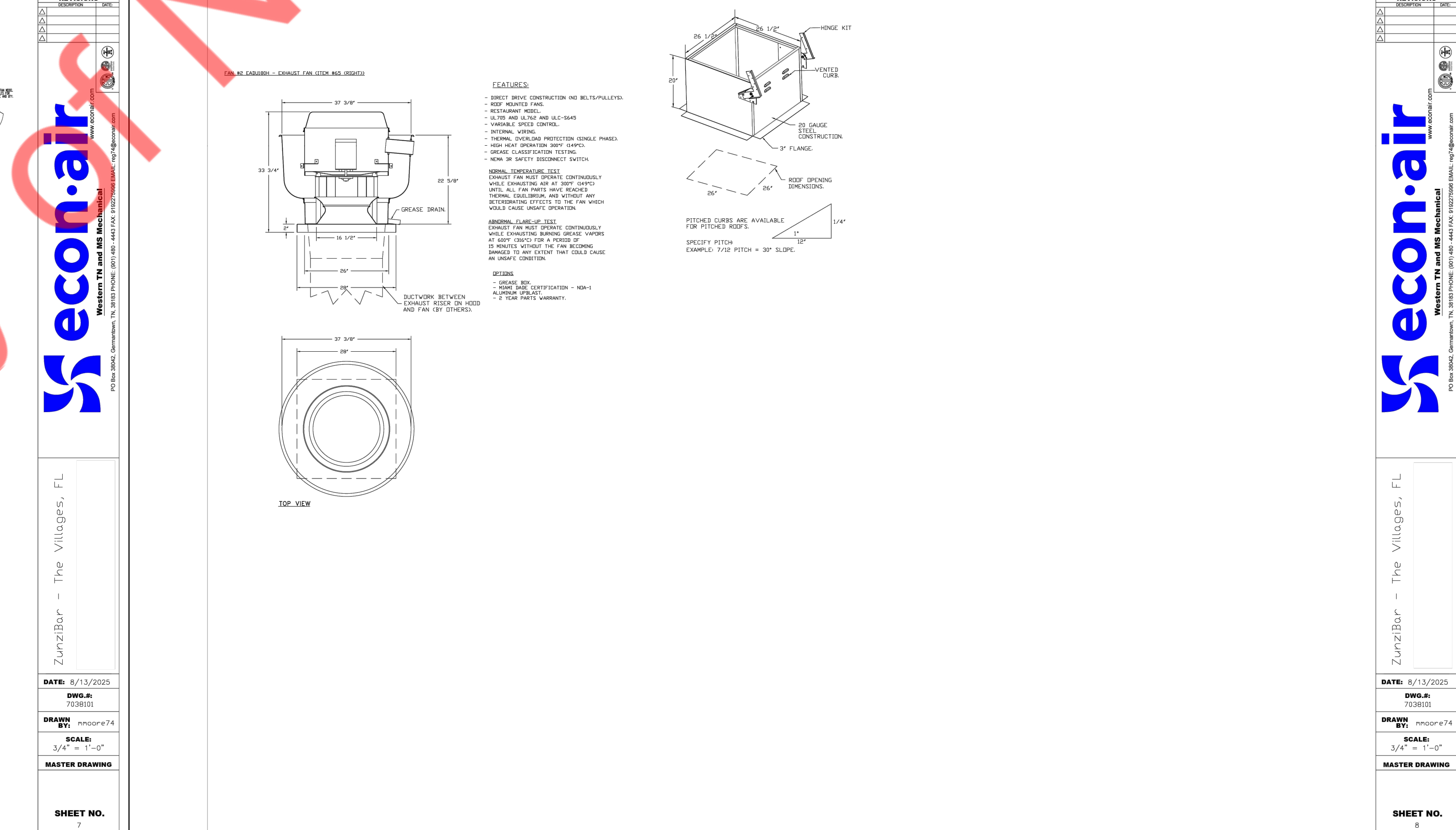
DRAWN  
BY: rhorne74

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

MASTER DRAWING

SHEET NO.

6

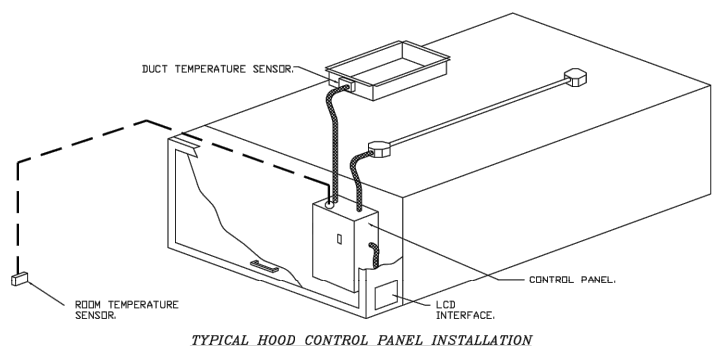








- DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS
- CONTROLS SHALL BE LISTED BY ETL, UL 508A AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM UNDERGROUND REQUIREMENTS OUTLINED IN IEC-402.7.3 (SDV).
  - THE CONTROL ENCLOSURE SHALL BE NOMINATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
  - TEMPERATURE PROBES LOCATED IN THE EXHAUST DUCT RISER/PIPE SHALL BE CONSTRUCTED OF STAINLESS STEEL.
  - A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIELD DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURE SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 502.1.1.
  - A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCE HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
  - A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
  - VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUTS TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
  - THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
  - AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEEDS PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN ZONE AS THE SUPPLY FAN.
  - THE SYSTEM SHALL OPERATE IN PREP HOSE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
  - A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED IN A COOKED HOOD.
  - A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE.
  - AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
    - A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
    - B. INTEGRATED GAS VALVE RESET FOR ELECTRIC GAS VALVES AND RESET RELAY REQUIRED.
    - C. VFD PAUSE/STOP WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
    - D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
    - E. HOUSING/DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
    - F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
    - G. AN ENERGY SAVING INDICATOR THAT UTILIZES MEASURES KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS

- THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:
  - AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR SUCH AS A VFD DRIVEN MOTOR MODULATE WITH TEMPERATURE IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DESIGNATED AS "DYNAMIC". THESE VFDs MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DESIGNATED AS "STATIC" FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS FOR THE REQUIREMENTS OUTLINED IN IEC-402.7.3 (SDV).
  - MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN MMI.
  - SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME. THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME THE SYSTEM WILL HAVE AN EXTINCTION SYSTEM TO PREVENT UNWANTED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
  - OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (BMS OR WIRELESS INTERLOCK).
  - FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTRARY TO TO RUN THE HOOD MAKEUP AIR WILL SHUTDOWN AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRIC GAS VALVE ACTIVATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

REVISIONS	
1	DATE
2	DATE
3	DATE

**recon·air**  
Mechanical, Electrical & Plumbing  
www.reconair.com  
PO Box 28642, Glenview, IL 60027-0642, 847.442.1100 FAX 847.442.1101

ZunziBar - The Villages, FL

DATE: 8/13/2025  
DWG.#:  
7038101  
DRAWN BY: mhoare74  
SCALE:  
3/4" = 1'-0"  
MASTER DRAWING

SHEET NO.  
13

SYSTEM DESIGN VERIFICATION (SDV)

IF ORDERED, GAS SERVICE WILL PERFORM A SYSTEM DESIGN VERIFICATION (SDV) ONCE ALL EQUIPMENT HAS HAD A COMPLETE START UP PER THE OPERATION AND INSTALLATION MANUAL. TYPICALLY, THE SDV WILL BE PERFORMED AFTER ALL INSPECTIONS ARE COMPLETE.

ANY FIELD RELATED DISCREPANCIES THAT ARE DISCOVERED DURING THE SDV WILL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND CORRESPONDING TRADES ON SITE. THESE ISSUES WILL BE DOCUMENTED AND FORWARDED TO THE APPROPRIATE SALES OFFICE. IF GAS SERVICE HAS TO RESOLVE A DISCREPANCY THAT IS A FIELD ISSUE, THE GENERAL CONTRACTOR WILL BE NOTIFIED AND BILLED FOR THE WORK. SHOULD A RETURN TRIP BE REQUIRED DUE TO ANY FIELD RELATED DISCREPANCY THAT CANNOT BE RESOLVED DURING THE SDV, THERE WILL BE ADDITIONAL TRIP CHARGES.

DURING THE SDV, GAS SERVICE WILL ADDRESS ANY DISCREPANCY THAT IS THE FAULT OF THE MANUFACTURER. SHOULD A RETURN TRIP BE REQUIRED, THE GENERAL CONTRACTOR AND APPROPRIATE SALES OFFICE WILL BE NOTIFIED THERE WILL BE NO ADDITIONAL CHARGES FOR MANUFACTURER DISCREPANCIES.

REVISIONS	
1	DATE
2	DATE
3	DATE

**recon·air**  
Mechanical, Electrical & Plumbing  
www.reconair.com  
PO Box 28642, Glenview, IL 60027-0642, 847.442.1100 FAX 847.442.1101

ZunziBar - The Villages, FL

DATE: 8/13/2025  
DWG.#:  
7038101  
DRAWN BY: mhoare74  
SCALE:  
3/4" = 1'-0"  
MASTER DRAWING

SHEET NO.  
14

ZUNZIBAR

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

REVISIONS DATES:	
07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
4 08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

HOOD DATA 4  
(4 OF 4)

M-9 4



## SCOPE OF WORK

1. REUSE THE EXISTING (1) 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL EXISTING FUSED DISCONNECT SWITCH AND CT METER FOR THE PROJECT SPACE.
2. NEW(1) 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "PP".
3. NEW (1) 150A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "P".
4. NEW(1) 150A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "K".
5. NEW (1) 150A(M.L.O.), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "T".
6. PROVIDE ALL NECESSARY EQUIPMENT AND ALL WIRING AND LIGHTING FOR THE PROPOSED TENANT SPACE. COORDINATE WITH G.C. FOR LOW VOLTAGE WIRING.

## ELECTRICAL PLAN NOTES

1. ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.

2. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.

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

4. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND PROVIDE ADVISORS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.

5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.

6. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.

7. ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.

8. ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.

9. CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.

10. ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.

11. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146.

12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.

13. ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.

14. SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.

15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.

16. PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.

17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.

18. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THIN INSULATION.

19. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.

20. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

21. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.

22. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.

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

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

25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKSMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.

26. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.

27. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

28. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.

29. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.

30. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.

31. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.

32. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.

33. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C. NEMA, AND IEC.

34. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.

35. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.

36. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE ELECTRICAL DIRECTORIES.

37. ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 18" A.F.F. UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.

38. ALL LIGHT SWITCHES TO BE AT 42" A.F.F.

39. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

40. BREAKER AND PANELS -- ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.

41. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.

42. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.

43. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.

44. CONTRACTOR SHALL CONFORM WITH ANY AND ALL REQUIREMENTS SUCH AS: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.

45. VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%, WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.

46. CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION -- FOR THE WHOLE CIRCUIT.

47. GAS PIPING SHALL BE BONDED.

48. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.

49. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.

50. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.

51. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).

52. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUILDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.

53. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.

54. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.

55. ALL PANELS TO BE UL LABELED.

56. 7-DAY 24-HOURS TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL MALL BUSINESS HOURS.

57. TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANY/ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANTS GC AT TENANT'S SOLE EXPENSE.





























58. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.

59. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.

60. ELECTRICAL PANELS MAY NOT BE RECESSED IN DIMINISHING PARTITIONS. SURFACE MOUNT OR FULL FURLOW WALL TO ACHIEVE FLUSH FINAL APPEARANCE.

61. COORDINATE ALL CONCRETE TRENCHING/CORING TO ENSURE THAT UNDER SLAB UTILITIES, ETC. ARE NOT DAMAGED DURING FLOOR CUT. ANY DAMAGE TO BE REPAIRED AT TENANTS EXPENSE. PRIOR APPROVAL AND COORDINATION WITH PROPERTY MANAGEMENT IS REQUIRED FOR ALL CONCRETE CUTTING.

## ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
	WALL SWITCH (SINGLE)
	WALL SWITCH (DIMMER)
	3-WAY WALL SWITCH
	DUPLEX RECEPTACLE
	QUADRUPLUX RECEPTACLE
	STUB UP FLEX TO RECEPTACLE
	STUB UP FLEX TO J-BOX
	STUB DOWN FROM CEILING FLEX TO RECEPTACLE
	STUB DOWN FROM CEILING FLEX TO J-BOX
	TELEPHONE/DATA PORT RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	AC INDOOR UNIT
	MOTOR SWITCH
	MOTORIZED DAMPER
	ELECTRICAL PANEL
	TELEVISION OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
	CEILING MOUNTED DATA OUTLET
	230 VOLT RECEPTACLE
	NON FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	CONVENIENCE OUTLET
	DUPLEX RECEPTACLE WITH USB AND USB C PROVISION

ABBREVIATIONS:

ABOVE FINISH FLOOR=A.F.F. COUNTER TOP LEVEL=C GROUND FAULT INTERRUPTER=GFCI VERIFY PRIOR TO INSTALL=VH WEATHER PROOF=WP EXHAUST FAN=EF WATER HEATER=WH WA=WASHER AUTHORITY HAVING JURISDICTION=A.H.J. KEF-KITCHEN EXHAUST FAN	BELOW COUNTER=BC PUSH BUTTON=PB UNDER CABINET=UC VAPOR PROOF=VP ELECTRICAL CONTRACTOR=E.C. ROOF TOP UNIT=RTU RECIRCULATION PUMP=RCP DR=DRYER MAU=MAKE UP AIR UNIT KMUA= KITCHEN MAKE UP AIR UNIT.
--	--

## GENERAL LIGHTING NOTES

- A. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.
- B. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.






### EXISTING CONDITIONS NOTES

**STOP AND READ**

THE CONTRACTOR AND SUB-CONTRACTORS **SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED.** THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/QTY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.

---

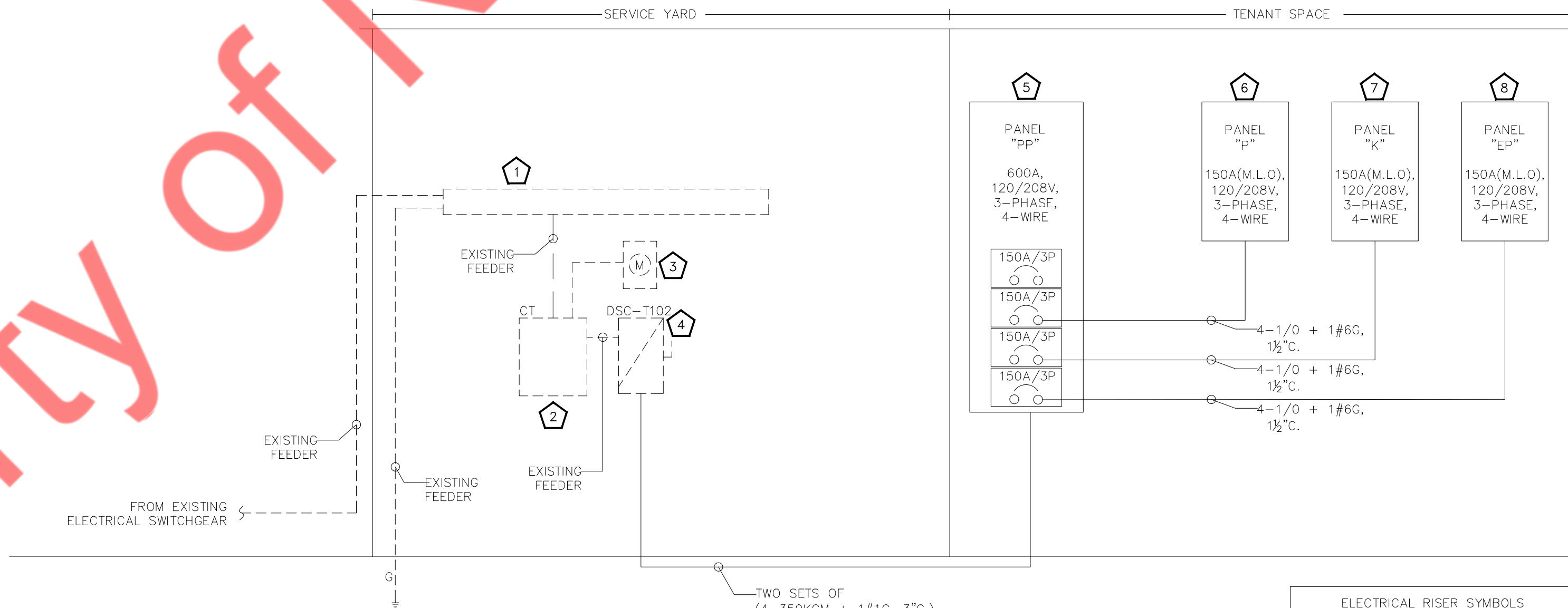
## LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	NUMBER OF FIXTURES	WATTAGE	TOTAL WATTS	MOUNTING
	L-1	RECESSED CAN LIGHTING @ THROUGHOUT	CREE LIGHTING	LR4X-2700K-7L 650	120	20	12 WATTS	240 WATTS	RECESSED
	L-2	HANGING PENDANTS @ LOW-TOP TABLES	CAPITAL LIGHTING	PLT-13421	120	4	3.5 WATTS	31.5 WATTS	RECESSED
	L-3	HANGING PENDANTS @ LOW-TOP TABLES	CAPITAL LIGHTING	PLT-13421	120	4	3.5 WATTS	31.5 WATTS	RECESSED
	L-4	HANGING PENDANTS @ HIGH-TOP TABLES	CAPITAL LIGHTING	PLT-13421	120	8	3.5 WATTS	10.5 WATTS	RECESSED
	L-5	HANGING PENDANTS @ HIGH-TOP TABLES	CAPITAL LIGHTING	PLT-13421	120	8	3.5 WATTS	10.5 WATTS	RECESSED
	L-6	HANGING PENDANTS @ ENTRY	CAPITAL LIGHTING	PLT-13421	120	1	3.5 WATTS	3.5 WATTS	RECESSED
	L-7	HANGING PENDANTS @ MAIN BAR	NAUTICAL FURNISHINGS	PLT-13421	120	7	3.5 WATTS	24.5 WATTS	RECESSED
	L-8	RBGW STRIP LIGHTING @ MILLWORK LIGHT BOXES	GM LIGHTING	LTR-S-24V-6.0W-RGBW-16	120	25	6 W/ FT	150 WATTS	-
	L-9	NEON SIGN @ EXPO SIGN BAND	LUMA-SPEC	-	120	10 FT	12W/ FT	120 WATTS	-
	L-10	EXTERIOR FANS @ UNDER BAR & SURF BOARD	CRAFTMADE	VEN52CW5	120	5	19 WATTS	95 WATTS	RECESSED
	L-11	WALL MOUNTED SCONCE @ EXTERIOR ENTRY	BARN LIGHT	BLE-G-CGG	120	3	4 WATTS	12 WATTS	RECESSED
	L-12	RECESSED CAN LIGHTING @ KITCHEN AREA	CREE LIGHTING	LR6X	120	13	12 WATTS	156 WATTS	RECESSED
	L-13	KITCHEN TROFFER	CREE LIGHTING	C-TR-B-BT22	120	10	36 WATTS	360 WATTS	RECESSED
	XC	CEILING MOUNTED EXIT SIGN / EMERGENCY LIGHT COMBO	LITHONIA LIGHTING	ECR-LED	120	7	4 WATTS	28 WATTS	WALL
	EU	WALL MOUNTED EMERGENCY LIGHTS	LITHONIA LIGHTING	ELM2	120	12	3 WATTS	36 WATTS	WALL
	OS	CEILING OCCUPANCY SENSOR	LEVITON	O2C10-UDW	120	-	-	-	CEILING
	OS	OCCUPANCY WALL SWITCH	INTERMATIC	IOS-DDR-WH	120	-	-	-	WALL
	QT 5WH	ATHENA 5" TOUCH SCREEN WHITE (QT 5 WH)	LUTRON	Q-TOUCH5-WH	120	-	-	-	WALL
	DMX	QS DMX OUTPUT CONTROL INTERFACE (DMX)	LUTRON	QSE-CI-DMX	120	-	-	-	WALL
	4A 5	ENERGI SAVR NODE PHASE ADAPTIVE 4 OUTPUT (QSN-4A5-S)	LUTRON	QSN-4A5-S	120	-	-	-	WALL
	QPS 1-E	ATHENA 1-LINK PROCESSOR PANEL WITH INTEGRAL POE SWITCH	LUTRON	QPS-1L-POE	120	-	-	-	WALL
	Q 5RL	SEE TOUCH QS INSERT 5 BUTTON WITH RAISE/ LOWER	LUTRON	QSW52-5BRLI-WH-G	120	-	-	-	WALL
	4T 20	ENERGI SAVR NODE 0-10V AND SOFTSWITCH	LUTRON	QSN2-4T20-S	120	-	-	-	WALL
	(E)	EXISTING TO REMAIN	-	-	-	-	-	-	-

REFER TO REFLECTED CEILING PLAN IN  
ARCHITECTURAL DRAWINGS FOR MORE  
INFORMATION ON COLORS AND TRIMS  
REQUIRED.

**NOTE:**


1. E.C. SHALL COORDINATE WITH ARCHITECT FOR FINAL FIXTURE COUNT AND TYPE.  
2. E.C. SHALL RECEIVE APPROVAL FROM ARCHITECTURE FOR LIGHTING FIXTURE SELECTION  
3. E.C. SHALL PROVIDE INSTALLATION SCHEDULE.  
4. ALL THE LIGHTING FIXTURE TYPES, QUANTITIES, AND TYPES OF CONTROLS SHALL BE  
COORDINATED WITH THE OWNER/ARCHITECT BEFORE COMMENCING ANY WORK. INFORM THE  
OWNER ON REQUEST FOR INFORMATION.  
5. E.C. SHALL PROVIDE REQUIRED POWER PACKS AND RELAYS SUITABLE FOR THE ABOVE LIGHT  
FIXTURES IN COORDINATION WITH THE LIGHTING VENDOR. BASE BID ACCORDINGLY.  
6. E.C. SHALL COORDINATE WITH LIGHTING VENDOR FOR EXACT DIMMER CAPABILITY WITH THE  
LIGHT FIXTURE. BASE BID ACCORDINGLY.  
7. \*\*\* INDICATES THE WATTAGE ASSUMPTION.





## ELECTRICAL RISER KEYED NOTES:

- |   |   |
|---|---|
| 1 | EXISTING WIREWAY TO REMAIN.   |
| 2 | EXISTING CT CABINET TO REMAIN. E.C TO CONFIRM THE CT COIL INSTALLATION. IF NOT PROVIDED PLEASE COORDINATE WITH UTILITY FOR THE SAME.                    |
| 3 | E.C TO COORDINATE WITH THE UTILITY AND PROVIDE THE NEW METER FOR THE PROJECT SPACE. METER INSTALLATION PER UTILITY GUIDELINES.                          |
| 4 | EXISTING 600A DISCONNECT SWITCH (DSC-T102) TO REMAIN. E.C. TO CONFIRM THE 600A FUSE INSTALLATION. IF NOT PROVIDED PLEASE PROVIDE. BASE BID ACCORDINGLY. |
| 5 | NEW 600A, 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "PP" FOR TENANT SPACE.   |
| 6 | NEW 150A (M.L.O), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "P" FOR TENANT SPACE.  |
| 7 | NEW 150A (M.L.O), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "K" FOR TENANT SPACE.  |
| 8 | NEW 150A (M.L.O), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "EP" FOR TENANT SPACE.   |

ELECTRICAL RISER SYMBOLS

—  NEW

—  EXISTING ITEM/FEEDER  
TO REMAIN

—  EXISTING ITEM/FEEDER  
TO BE DISCONNECTED &  
REMOVED

## REVISIONS DATES:

07/10/2025	PROJECT CORD
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD
11/13/2025	PROJECT CORD
11/20/2025	PROJECT CORD

11/20/2025

MICHAEL TOBIAS #76496  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

# ELECTRICAL PLAN NOTES AND RISER DIAGRAM

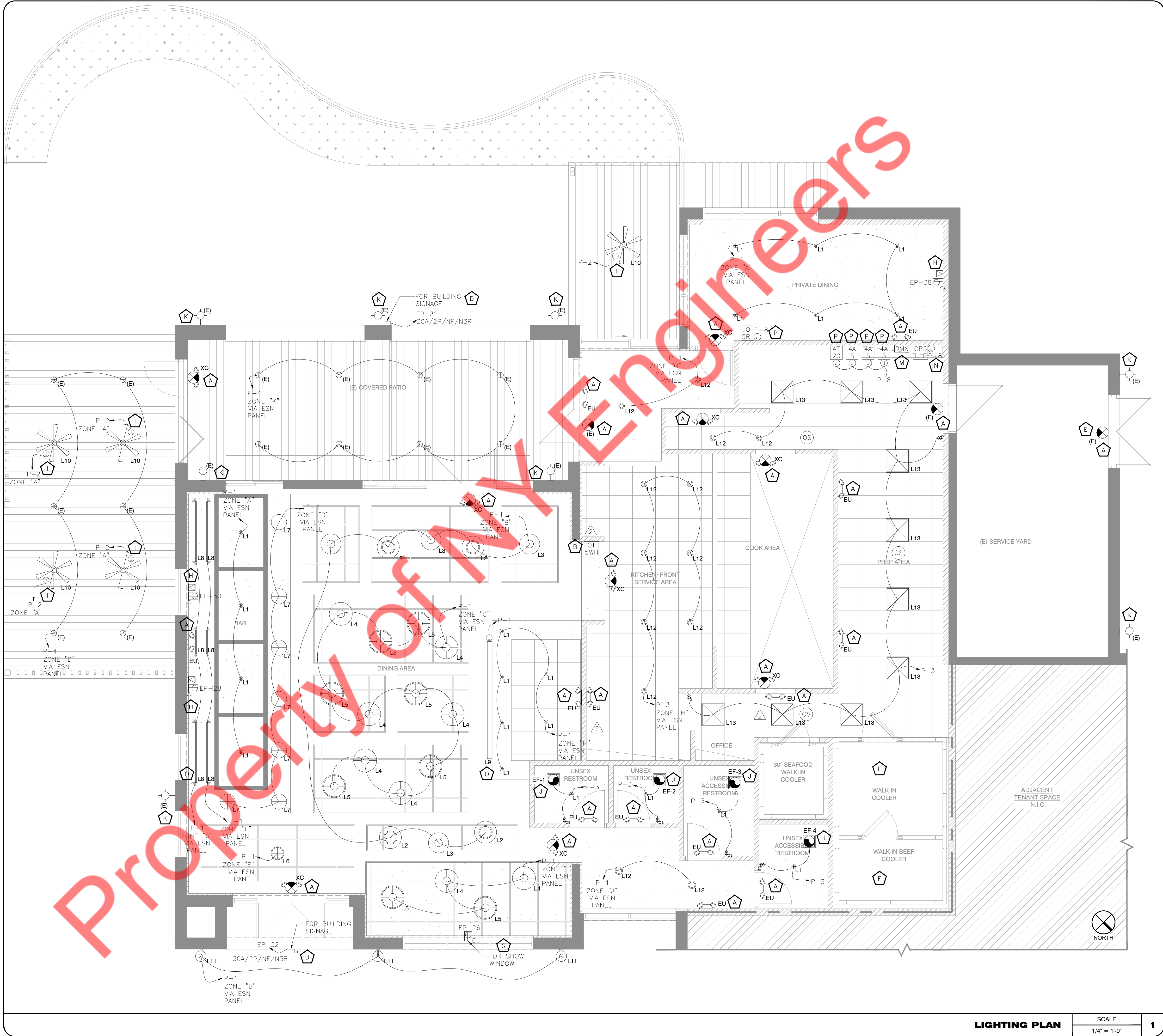


ELECTRICAL LIGHTING PLAN GENERAL NOTES:

1. LIGHT FIXTURE SHALL BE SHIELDED.
2. COORDINATE WORK WITH MECHANICAL, REFRIGERATION AND EQUIPMENT CONTRACTORS, INCLUDING COOLER/FREEZER WORK AND ICE MACHINE CONDENSING UNITS.
3. VERIFY ROUGH-IN DIMENSIONS AND POWER REQUIREMENTS WITH KITCHEN EQUIPMENT DISTRIBUTOR PRIOR TO ROUGH-IN.
4. PROVIDE FINAL CONNECTIONS WITHIN FRONT COUNTER, COOKCENTER PANEL, REMOTE REFRIGERATION UNITS, AND ICE MACHINE REMOTE UNIT WHEN INSTALLED BY VENDOR.
5. ENSURE ADEQUATE CONDUIT SIZE FOR ELECTRICAL AND COMMUNICATION WIRING ON SITE AND INTO BUILDING.
6. CIRCUITS MAY BE GROUPED WITHIN COMMON CONDUITS PER NEC REQUIREMENTS UNLESS NOTED OTHERWISE.
7. WIRE ROOF TOP UNIT CONTROL CIRCUIT THROUGH AUXILIARY CONTACTS IN SMOKE DETECTOR AND MAKE ALL FINAL CONNECTIONS. (TYPICAL OF ALL ROOF TOP UNITS)
8. SEAL ROOF PENETRATIONS PER ROOFING MANUFACTURER'S INSTRUCTIONS. COORDINATE WORK ABOVE THE CEILING WITH OTHER TRADES TO PROVIDE THE GREATEST POSSIBLE CLEARANCE.CONDUITS SHALL BE ROUTED IN THE DIRECTION OF THE TRUSSES.
10. ONLY EMT CONDUITS ARE ALLOWED IN RECEIVING/DRY STORAGE.
11. ELECTRICAL CONTRACTOR TO COORDINATE WITH LIGHTING VENDOR/OWNER FOR EXACT LIGHTING CONTROL AND ZONING REQUIREMENTS. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY BEFORE COMMENCING ANY WORK.. BASE BID ACCORDINGLY.

ELECTRICAL LIGHTING PLAN KEYED WORK NOTES:

- A** CONNECT ALL EMERGENCY EGRESS LIGHTING FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
- B** E.C SHALL COORDINATE EXACT LOCATION OF ATHENA 5" TOUCH SCREEN-WHITE (QT 5 WH) AND SEETOUGH QS INSERT 5 BUTTON WITH RAISE/ LOWER (QSW2-5BRLI-WH-G) WITH OWNER/ ARCHITECT/ LIGHTING VENDOR. E.C SHALL COORDINATE WITH LIGHTING VENDOR FOR EXACT MOUNTING HEIGHT AND POWER REQUIREMENTS FOR ATHENA 5" TOUCH SCREEN - WHITE (QT 5 WH). E.C SHALL COORDINATE EXACT QUANTITY PER SITE REQUIREMENT/ LIGHTING VENDOR REQUIREMENT. BASE BID ACCORDINGLY.
- C** NOT USED.
- D** E.C TO COORDINATE WITH OWNER/ SIGN VENDOR FOR THE EXACT POWER & CONNECTION REQUIREMENTS FOR BUILDING SIGNAGES. THE BUILDING SIGNAGES SHOULD BE CONTROLLED BY PHOTOCCELL WITH ASTRONOMICAL TIME CLOCK. BASE BID ACCORDINGLY.
- E** EXISTING LIGHT FIXTURE IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO THE RESPECTED NEW ELECTRICAL PANEL ALONG WITH THEIR CONTROLS. E.C. SHALL VERIFY THE CONTROLS IN FIELD AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- F** EXISTING LIGHT FIXTURE IN THE WALK IN COOLER ALONG WITH ITS CONTROLS AND ELECTRICAL CONNECTION SHALL REMAIN AS IT IS AND SHALL REMAIN CONNECTED TO THE EXISTING ELECTRICAL PANEL. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE LIGHTING CONNECTION AND CONTROL BEFORE COMMENCING ANY WORK. PROVIDE NEW IF FOUND INOPERABLE. E.C TO COORDINATE IN FIELD FOR ANY OTHER REQUIREMENT WITH OWNER/VENDOR. BASE BID ACCORDINGLY.
- G** PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
- H** POWER AND DATA PROVISION FOR EXTERIOR TV. E.C SHALL COORDINATE WITH ARCHITECT/OWNER/VENDOR FOR EXACT LOCATION, MOUNTING HEIGHT AND POWER REQUIREMENT BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- I** PROVIDE VARIABLE SPEED CONTROL SWITCH FOR FAN. E.C SHALL COORDINATE WITH MANUFACTURER/ VENDOR FOR EXACT POWER REQUIREMENT PRIOR TO INSTALLATION. BASE BID ACCORDINGLY.
- J** INTERCONNECT EXHAUST FANS EF-1, EF-2, EF-3 & EF-4 WITH LIGHTS. E.C TO COORDINATE WITH MECHANICAL DRAWINGS.
- K** EXISTING EXTERIOR BUILDING LIGHT FIXTURE SHALL REMAIN CONNECTED TO THE RESPECTIVE EXISTING HOUSE PANEL ALONG WITH THEIR CONTROLS. E.C. SHALL VERIFY THE CONNECTION IN FIELD AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- L** NOT USED.
- M** E.C SHALL COORDINATE EXACT LOCATION OF OS DMX OUTPUT CONTROL INTERFACE (DMX) WITH OWNER/ ARCHITECT. E.C SHALL COORDINATE WITH LIGHTING VENDOR FOR EXACT MOUNTING HEIGHT AND POWER REQUIREMENTS FOR OS DMX OUTPUT CONTROL INTERFACE (DMX). E.C SHALL COORDINATE EXACT QUANTITY PER SITE REQUIREMENT/ LIGHTING VENDOR REQUIREMENT. BASE BID ACCORDINGLY.
- N** E.C SHALL COORDINATE EXACT LOCATION OF ATHENA 1-LINK PROCESSOR PANEL WITH INTEGRAL POE SWITCH (QP5-1L-POE) WITH OWNER/ ARCHITECT. E.C SHALL COORDINATE WITH LIGHTING VENDOR FOR EXACT MOUNTING HEIGHT AND POWER REQUIREMENTS FOR ATHENA 1-LINK PROCESSOR PANEL WITH INTEGRAL POE SWITCH (QP5-1L-POE). E.C SHALL COORDINATE EXACT QUANTITY PER SITE REQUIREMENT/ LIGHTING VENDOR REQUIREMENT. BASE BID ACCORDINGLY.
- O** E.C SHALL COORDINATE WITH LIGHTING VENDOR/ ARCHITECT/ OWNER FOR ANY ACCESSORIES AND CONTROL REQUIREMENT FOR THE LIGHT FIXTURE NAMED "L-8" AND "L-9" IN FIELD. E.C SHALL VERIFY EXACT LOCATION OF JUNCTION BOX IN FIELD. E.C SHALL VERIFY THE COMPATIBILITY OF LIGHT FIXTURE "L-8" AND "L-9" WITH LIGHT VENDOR BEFORE COMMENCING ANY WORK. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY. PROVIDE CIRCUIT AND CONTROL AS REQUIRED. BASE BID ACCORDINGLY.
- P** E.C SHALL COORDINATE EXACT LOCATION OF ENERGI SAVR NODE PHASE ADAPTIVE 4 OUTPUT (QSN-4A5-S), ENERGI SAVR NODE 0-10V AND SOFTSWITCH (QSN2-4T20-S) WITH OWNER/ ARCHITECT. E.C SHALL COORDINATE WITH LIGHTING VENDOR FOR EXACT MOUNTING HEIGHT AND POWER REQUIREMENTS FOR ENERGI SAVR NODE PHASE ADAPTIVE 4 OUTPUT (QSN-4A5-S). E.C SHALL COORDINATE EXACT QUANTITY PER SITE REQUIREMENT/ LIGHTING VENDOR REQUIREMENT. BASE BID ACCORDINGLY.



LIGHTING PLAN

SCALE  
1/4" = 1'-0"

1

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7606  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

LIGHTING PLAN

E-2

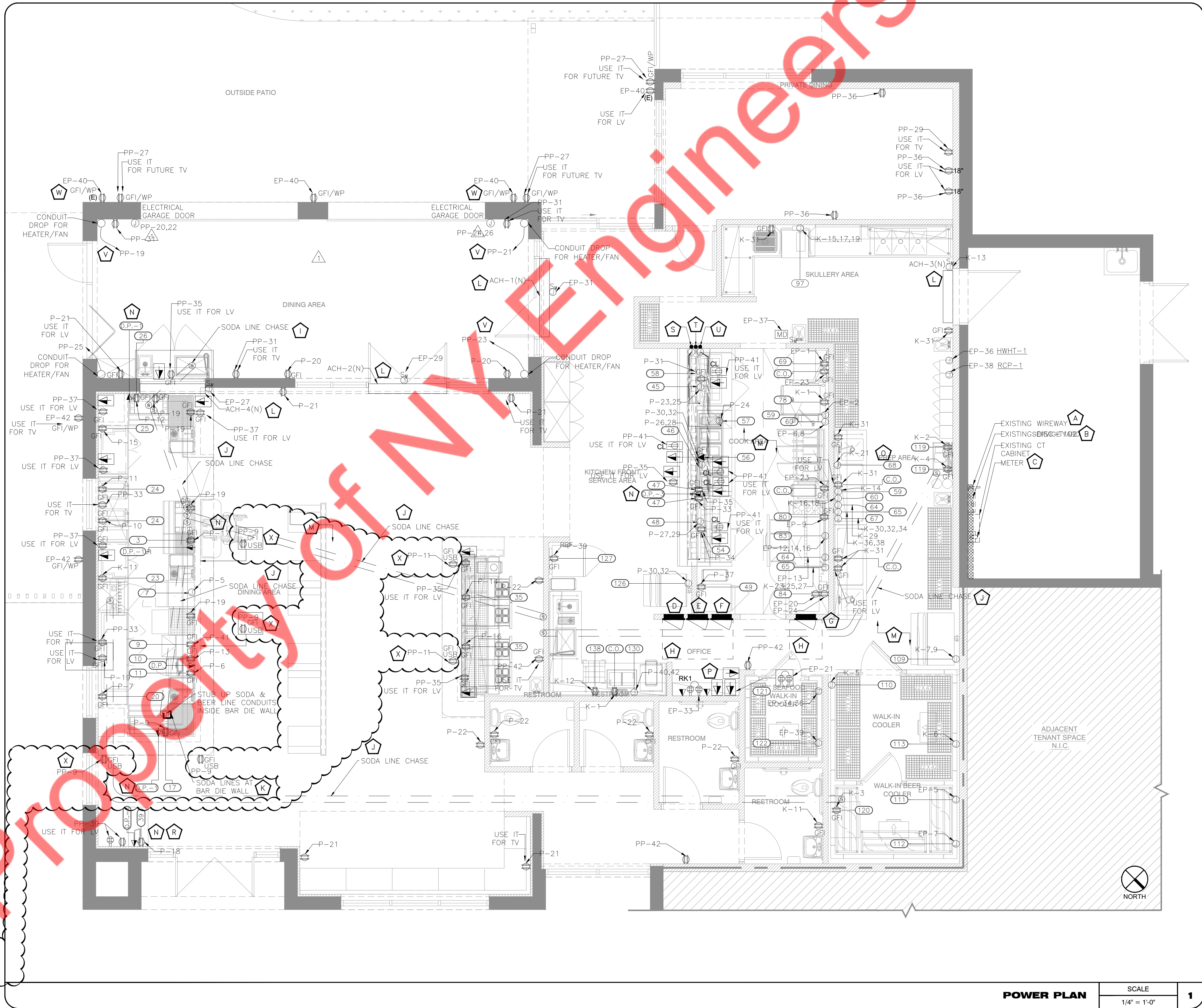


ELECTRICAL POWER PLAN GENERAL NOTE:

1. EC SHALL COORDINATE WITH THE EQUIPMENT MANUFACTURER FOR ALL THE EQUIPMENT WHICH NEEDS ELECTRICAL SUPPLY AND CONFIRM THE POWER PROVISION REQUIREMENTS PRIOR TO COMMENCING ANY WORK. COORDINATE THE MOUNTING HEIGHTS AS WELL BEFORE ROUGH-INS. BASE BID ACCORDINGLY.
2. EC SHALL COORDINATE WITH OWNER FOR EXACT POWER PROVISION REQUIREMENTS TO EACH ROOM PRIOR TO COMMENCING ANY WORK. COORDINATE THE MOUNTING HEIGHTS AS WELL BEFORE ROUGH-INS. BASE BID ACCORDINGLY.
3. 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 HAVE GFI BREAKER IN PANELS.
4. DIMENSION OF RECEPTACLE/OUTLET FOR KITCHEN EQUIPMENT SHALL BE COORDINATED AS PER KITCHEN VENDOR/FOOD SERVICE EQUIPMENT ELECTRICAL ROUGH IN PLAN & SCHEDULE.
5. ALL EXTERNAL ELECTRICAL CONDUITS AND WIRING SHALL BE INSTALLED OR ROUTED UNDERGROUND/FULLY CONCEALED FROM PUBLIC VIEW.
6. EC SHALL COORDINATE WITH OWNER/LV CONTRACTOR/LV VENDOR FOR MOUNTING HEIGHT AND LOCATION OF EACH LV OUTLET(DATA/RECEPTACLE FOR LV/RECEPTACLE FOR TV) BEFORE ROUGH-INS. BASE BID ACCORDINGLY.

ELECTRICAL POWER PLAN KEYED WORK NOTES:

- A** EXISTING WIREWAY TO REMAIN.
- B** EXISTING 600A DISCONNECT SWITCH DISC(T-102) SERVING TENANT SPACE TO REMAIN.
- C** E.C. TO CONFIRM THE CT COIL INSTALLATION. IF NOT PROVIDED PLEASE COORDINATE WITH UTILITY FOR THE SAME.
- D** NEW 600A, 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "P" FOR TENANT SPACE.
- E** NEW 150A (M.L.O.), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "P" FOR TENANT SPACE.
- F** NEW 150A (M.L.O.), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "K" FOR TENANT SPACE.
- G** NEW 150A (M.L.O.), 120/208V, 3 PHASE, 4-WIRE ELECTRICAL PANEL "EP" FOR TENANT SPACE.
- H** E.C. TO COORDINATE WITH ARCHITECT/OWNER FOR THE EXACT LOCATION OF ELECTRICAL PANEL. E.C. SHALL VERIFY THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.
- I** E.C. TO FURNISH AND INSTALL ALL CONDUIT FOR REFRIGERATION AND SODA, & BEER BEVERAGE LINES. ALL RUNS SHALL BE THROUGH A 6" ELECTRICAL PVC CHASE RUNNING OVERHEAD ABOVE CEILING AND UTILIZING 24" LONG SWEEPING RADIUS ELL'S FOR ALL 90 DEGREE TURNS. OVERHEAD SODA LINES TO "TEE" OFF AND SHALL DROP DOWN INSIDE INTERNAL BUILDING WALLS TO 12" AFF. SODA LINES SHALL EXIT WALL THRU A 6" TALL X 12" WIDE PULL BOX SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. E.C. SHALL VERIFY THE LOCATION OF THE PULL BOX FOR LINES WITH THE VENDOR PRIOR TO INSTALLATION. BASE BID ACCORDINGLY.
- J** E.C. TO FURNISH AND INSTALL ALL CONDUIT S FOR REFRIGERATION AND BEVERAGE/SODA LINE CHASES. ALL RUNS SHALL BE THROUGH A 6" I.D. DIAMETER ELECTRICAL PVC CHASE UNDER SLAB AND UTILIZES 24" LONG SWEEPING RADIUS ELL'S FOR ALL 90 DEGREE TURNS. EXTEND PVC UP THROUGH PENETRATION TO 6" ABOVE FINISHED FLOOR. E.C. SHALL VERIFY THE LOCATION OF THE PULL BOX FOR LINES WITH THE VENDOR PRIOR TO INSTALLATION. BASE BID ACCORDINGLY.
- K** ELECTRICIAN TO FURNISH AND INSTALL ALL CONDUIT S FOR REFRIGERATION, BEER, AND BEVERAGE/SODA LINE CHASES. ALL RUNS SHALL BE THROUGH A 6" I.D. DIAMETER ELECTRICAL PVC CHASE UNDER SLAB AND UTILIZES 24" LONG SWEEPING RADIUS ELL'S FOR ALL 90 DEGREE TURNS. EXTEND PVC UP THROUGH PENETRATION TO 6" ABOVE FINISHED FLOOR. THE ELECTRICIAN WILL VERIFY THE LOCATION OF THE PULL BOX FOR LINES WITH THE VENDOR PRIOR TO INSTALLATION.
- L** E.C. SHALL COORDINATE WITH AIR CURTAIN VENDOR/OWNER FOR EXACT LOCATION AND POWER REQUIREMENT. BASE BID ACCORDINGLY.
- M** E.C. SHALL COORDINATE WITH THE EQUIPMENT MANUFACTURER FOR ALL THE EQUIPMENT WHICH NEEDS ELECTRICAL SUPPLY AND CONFIRM THE POWER PROVISION REQUIREMENTS PRIOR TO COMMENCING ANY WORK. COORDINATE THE MOUNTING HEIGHTS AS WELL BEFORE ROUGH-INS. BASE BID ACCORDINGLY.
- N** E.C. SHALL CO-ORDINATE WITH LV VENDOR FOR EXACT ROUTING, LOCATION, SIZE OF THE CONDUIT UNDER THE FLOOR FOR POS TICKET PRINTER & POS STATION. BASE BID ACCORDINGLY.
- O** ELECTRICAL CONTRACTOR TO CO-ORDINATE WITH FIRE SUPPRESSION SYSTEM VENDOR FOR ITS POWER REQUIREMENT, EXACT LOCATION AND OTHER DETAILS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- P** QUAD RECEPTACLE OUTLET FOR PC/OFFICE DESK. ELECTRICAL CONTRACTOR TO CO-ORDINATE WITH ARCHITECT/OWNER FOR EXACT POWER REQUIREMENT, LOCATION, MOUNTING HEIGHT OF OUTLET/DATA AND OTHER DETAILS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- Q** NOT USED.
- R** E.C. TO COORDINATE WITH ARCHITECT FOR THE EXACT LOCATION OF POS/SEATING MONITORING SYSTEM OUTLET AND MOUNTING DETAILS OF RETAIL AREA.
- S** STUB DOWN FROM ABOVE CEILING IN BUILDING WALL FOR FOUR ( 4 ) ELECTRICAL CIRCUITS TO JUNCTION BOX AT 56" AFF FOR ITEMS #45, #46, #48, & #57 - DUAL HEAT LAMPS WITH DISPLAY LIGHTS - STUB-OUT AND FLEX EACH ELECTRICAL CIRCUIT UNDERNEATH S/S PASS-THRU OVERSHELF TO THE CONNECTION POINTS FOR EACH DUAL HEAT LAMP AS SHOWN ON THIS PLAN.
- T** STUB DOWN FROM ABOVE CEILING IN BUILDING WALL & STUB-OUT AT 18" AFF FOR THREE ( 3 ) ELECTRICAL CIRCUITS FOR ITEMS #54, #55, & #56 - FOR EACH ELECTRICAL CIRCUIT THRU HORIZONTAL ELECTRICAL CHASE ON BACK OF ITEM #40 - S/S DISH/PLATE CABINET TO JUNCTION BOXES/ELECTRICAL RECEPTACLES MOUNTED ON BACK OF DISH/PLATE CABINET AT 18" AFF AS SHOWN ON THIS PLAN.
- U** STUB DOWN FROM ABOVE CEILING IN BUILDING WALL FOR TWO ( 2 ) ELECTRICAL CIRCUITS AND FOUR ( 4 ) DATA PORT CAT6 OR CAT7 ETHERNET CABLES TO JUNCTION BOX AT 56" AFF FOR ITEMS #47 - POS ORDER TICKET PRINTER & D.P.-3 OUTLET - STUB-OUT & FLEX EACH ELECTRICAL CIRCUIT & ETHERNET CABLE UNDERNEATH S/S PASS-THRU OVERSHELF TO PEDESTAL OUTLETS MOUNTED ON TOP OF OVERSHELF AS SHOWN ON THIS PLAN.
- V** E.C. TO COORDINATE WITH MECHANICAL CONTRACTOR/MANUFACTURER FOR THE EXACT POWER REQUIREMENT, LOCATION, BREAKER SIZE, CONDUIT AND FEEDER SIZE FOR HEATER OR FAN.
- W** E.C. TO COORDINATE WITH MANUFACTURER FOR THE EXACT POWER REQUIREMENT AND CONNECTION OF ELECTRICAL GARAGE DOOR.
- X** ALL 125-VOLT 15- OR 20-AMPERE RECEPTACLE WITH USB CHARGER, THAT ADDITIONALLY PROVIDES CLASS 2 POWER SHALL BE LISTED AND CONSTRUCTED SUCH THAT THE CLASS 2 CIRCUITRY IS INTEGRAL WITH THE RECEPTACLE PER NEC 406.3(F). BASE BID ACCORDINGLY.



POWER PLAN

SCALE

1/4" = 1'-0"

1

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

POWER PLAN

E-3

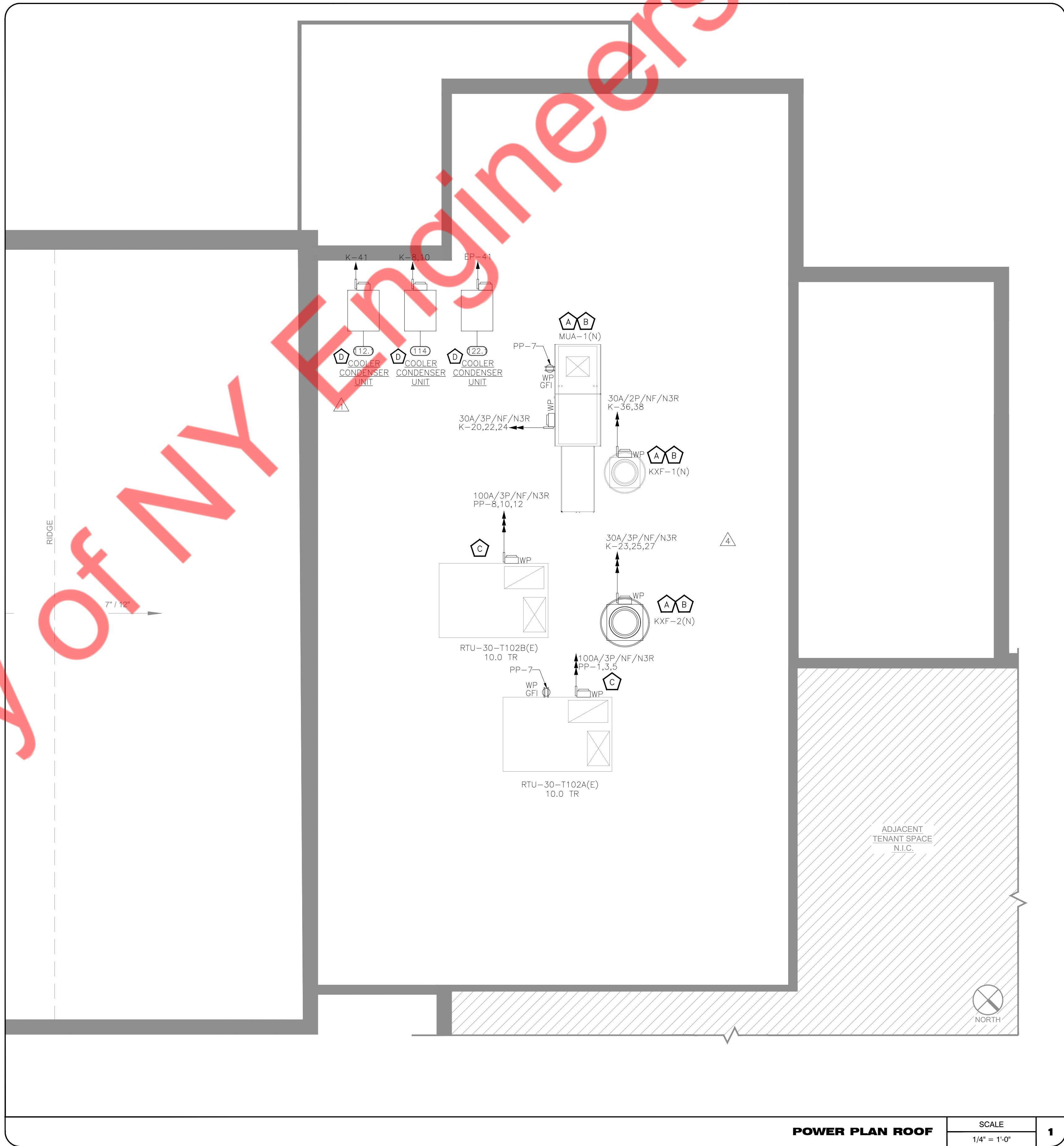


EQUIPMENT SCHEDULE

ITEM NO.	DESCRIPTION	VOLTS	PH.	AMPS	KW	HP	AFF
3	POS ORDER/RECEIPT TICKET PRINTER	115	1	4.0			39"
7	GLASS WASHER ( ECOLAB - OMEGA 5E )	115	1	16.0		3/4	12"
9	19.75"W x 17.75"D x 39.50" TALL ICE MAKER WITH BIN ( 2" SQUARE CUBE ICE )	115	1	5.0		1/4	12"
10	POS STATION	115	1	4.0			12"
11	POS RECEIPT TICKET PRINTER	115	1	4.0			12"
17	POS ORDER/RECEIPT TICKET PRINTER	115	1	4.0			39"
20	84"W x 24-1/8"D x 41"H BACK BAR CABINET, REFRIGERATED, 3-SECTION ( 3-DOORS )	120	1	7.0		1/4	24"
23	36"W x 24-1/8"D x 41"H BACK BAR CABINET, FREEZER, 1-SECTION ( 1-DOOR )	120	1	5.0		1/3	24"
24	16-1/2"W 26"D x 29"H FROZEN DRINK MACHINE, 2 - 8 QT HOPPER CAPACITY	115	1	13.0		3/4	30"
25	44"W x 24-1/8"D x 41"H BACK BAR CABINET, REFRIGERATED, 2-SECTION ( 2-DOORS )	120	1	2.75		1/8	24"
26	POS ORDER/RECEIPT TICKET PRINTER	115	1	4.0			39"
35	48-1/4"W x 31"D x 35-5/8"H UNDERCOUNTER REFRIGERATOR UNIT, 2-SECTION ( 4-DRAWERS )	115	1	2.4		1/5	12"
39	POS/SEATING MONITORING SYSTEM	115	1	4.0			24"
45	42"W DUAL HEAT LAMP ( MOUNTED UNDERNEATH PASS-THRU OVERSHELF )	120/208	1	8.0	1.53		54"
46	54"W DUAL HEAT LAMP ( MOUNTED UNDERNEATH PASS-THRU OVERSHELF )	120/208	1	10.9	2.09		54"
47	POS ORDER TICKET PRINTERS	115	1	4.0			54"
48	54"W DUAL HEAT LAMP ( MOUNTED UNDERNEATH PASS-THRU OVERSHELF )	120/208	1	10.9	2.09		54"
49	25-1/4"W x 30-3/4"D x 71"H HEATED HOLDING/PROOFING CABINET, 1-SECTION ( 1-DOOR )	120	1	16.7	2.0		24"
54	60-1/4"W x 30"D x 35-3/5"H SANDWICH/SALAD PREP REFRIGERATED COUNTER UNIT, 2-SECTION ( 2-DOORS )	115	1	4.4		1/4	18"
56	74"W x 31-1/2"D x 36"H 5-WELL HOT FOOD TABLE W/ SINGLE PANTRY FILL FAUCET	208	1	24.0			18"
57	18"W HEAT LAMP ( MOUNTED UNDERNEATH PASS-THRU OVERSHELF )	120	1	2.2	0.37		54"
58	48-1/4"W x 30"D x 35-3/4"H SANDWICH/SALAD PREP REFRIGERATED COUNTER UNIT, 2-SECTION ( 2-DOORS )	115	1	4.4		1/3	18"
59	EXHAUST HOOD - LIGHT CIRCUIT ( HOOD SEC. #1 )	120	1	15 ckt			CLG
60	EXHAUST FAN	208	1	6.9		1.0	ROOF
63	MUA SUPPLY FAN	208	3	8.3		2.0	ROOF
64	EXHAUST HOOD - LIGHT CIRCUIT ( HOOD SEC. #2 )	120	1	15 ckt			
65	EXHAUST FAN	208	1	6.9		1.0	ROOF
67	REMOTE EXHAUST HOOD ELECTRICAL CONTROL PANELBOX ( INSIDE REMOTE S/S WALL UTILITY CABINET )	120/208	1/3	15/175			CLG
68	REMOTE ANSUL - TANK FIRE SUPPRESSION ( INSIDE REMOTE S/S WALL UTILITY CABINET )	120	1	15 ckt			CLG
69	27-1/2"W x 30"D x 33-5/8"H WORKTOP REFRIGERATOR, 1-SECTION ( 1-DOOR )	115	1	2.2		1/5	24"
80	60"W x 33-1/2"D x 21-3/8"H EQUIPMENT STAND, REFRIGERATED BASE UNIT, 1-SECTION ( 2-DRAWERS )	120	1	1.4			24"
78	TILTING SKILLET, 30 GALLON	115	1	3.2		1/4	24"
83	48"W x 31-1/2"D x 15-3/8"H HD GRIDDLE, ELECTRIC, COUNTERTOP	208	3	67.4	21.6		24"
84	40-1/4"W x 37-3/4"D x 70"H DOUBLE DECK CONVECTION OVEN, GAS, MOBILE	120	1	7.7			48"
	TOP OVEN	120	1	7.7			24"
	BOTTOM OVEN	120	1	7.7			24"
97	DISHWASHER ( ECOLAB XL-HT VV )	208	3	51.7		3/4	24"
104	AIR CURTAIN, UNHEATED	120	1	13.0	0.99	(2)1/2	114"
109	48"W ICE MACHINE W/ WATER FILTER	208	1	18.5	4.66		66"
110	WALK-IN COOLER	120	1	15 ckt			114"
111	WALK-IN BEER COOLER	120	1	15 ckt			114"
112	WALK-IN BEER COOLER EVAPORATOR COIL UNIT	115	1	0.8			114"
112.1	WALK-IN BEER COOLER CONDENSING UNIT	208-230	1	5.7		1/2	48"
113	WALK-IN COOLER EVAPORATOR COIL UNIT	115	1	1.6			114"
114	WALK-IN COOLER CONDENSING UNIT	208-230	1	7.4		3/4	48"
119	BAG-N-BOX, SODA DISPENSING SYSTEM	120	1	15 ckt			24"
120	GLYCOL CHILLER/DRAFT BEER POWER PACK DISPENSING SYSTEM	120	1	7.0			114"
121	30" SEAFOOD WALK-IN COOLER	120	1	15 ckt			114"
122	30" SEAFOOD WALK-IN COOLER EVAPORATOR COIL UNIT	115	1	0.8			114"
122.1	30" SEAFOOD WALK-IN COOLER CONDENSING UNIT	208-230	1	5.7		1/2	48"
126	30"W PELLET ICE MACHINE W/ WATER FILTER	208	1	14.2	4.94	1.5	66"
127	28-3/4"W x 30-3/4"D x 78"H REACH-IN REFRIGERATOR, 1-SECTION ( 1-DOOR )	115	1	2.5		1/4	24"
130	DUAL COFFEE/TEA BREWER	120/240	1	25.0	6.0		48"
138	DROP-IN ICE CREAM FREEZER	115	1	1.8		1/5	24"
C.O.	CONVENIENCE OUTLET	120	1	15 ckt			48"
D.P.	DATA PORT RECEPTACLE	*	*	*	*	*	12"
D.P.-1	DATA PORT RECEPTACLE	*	*	*	*	*	37"
D.P.-2	DATA PORT RECEPTACLE	*	*	*	*	*	24"
D.P.-3	DATA PORT RECEPTACLE	*	*	*	*	*	56"

POWER PLAN KEYED NOTES:

- A** ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF THE MECHANICAL UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.
- B** 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.
- C** ELECTRICAL CONTRACTOR TO VERIFY IN-FIELD THE EXACT LOCATION OF EXISTING RTU AND RECRUIT THE EXISTING UNIT TO TENANT SPACE AS SHOWN. ALSO, COORDINATE DISCONNECT AND FUSE REQUIREMENT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
- D** ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WALK-IN BOX MANUFACTURER/VENDOR/OWNER FOR EXACT LOCATION AND POWER REQUIREMENT OF THE WALK-IN BOX MANUFACTURER/VENDOR/OWNER UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED. BASE BID ACCORDINGLY.



NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

POWER PLAN  
ROOF

E-4



DEVICE LEGENDS									
ID	DESCRIPTION	DEVICE SPECS			BOX INSTALL			NOTES	
		DIMENSIONS (HxWxD)	WEIGHT	DETAIL	BOX TYPE	CL MOUNTING	POWER		
RK1	SANUS CFX2144 44U	84.8" x 23.6" x 23.7"	240 LBS	1/AV-302	CABLE TRAY ABOVE	N/A	(3) DEDICATED 120V/240 CIRCUITS	PROVIDE DEDICATED #6 GROUND BONDING CONDUCTOR	
S1	BIAMP EX-SB-UB-B	12.68" x 16.61" x 10.28"	35.27 LBS	4/AV-301	2G BOX	SEE FLOOR PLAN		TWO-WAY, FULL RANGE, PASSIVE LOUDSPEAKER	
S2	BIAMP DX-IC-A-W	7.95" (D) 5.7"	3.5 LBS	8/AV-301	4" OCTAGON BOX	SEE DETAIL			
S3	BIAMP DX-IC-B-W	VARIES	VARIES	8/AV-301	-	SEE DETAIL			
S4	ACOUSTICSCAPE TRU-A5-1	VARIES	VARIES	-	-				
S81	BIAMP 55-2128	17.4" x 28.19" x 18.9"	75.6 LBS	DETAIL PENDING	2G BOX	BOTTOM OF TRUSS		HIGH POWER SUB-BASS LOUDSPEAKER	
TV1	55" 2000N6 DYLOX OUTDOOR	VARIES	VARIES	1/AV-301	2G BOX W/12 MUDGING	SFE FLOOR PLAN	DUPLEX OUTLET PER DETAIL	PROVIDE 3/4" PLYWOOD BACKING, DUPLEX OUTLET, AND CONDUIT PER DETAIL	
TV2	55" 2000N6 DYLOX OUTDOOR	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV3	55" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV4	65" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
C1	OPTIMAL AUDIO ZONE PAD 1-2 ZONE WALL CONTROL	3.39" x 5.75" x 1.55"	<1 LB		3G BOX	SEE HEIGHT			
C4	OPTIMAL AUDIO ZONE PAD 4-4 ZONE WALL CONTROL WITH LOCAL INPUT	3.39" x 5.75" x 1.55"	<1 LB	2/AV-301	3G BOX	SEE DETAIL	DEDICATED 120V/240V QUAD OUTLET	PROVIDE 3G BOX AT BOTH 48" AFF & 38" AFF WITH QUAD OUTLET PER DETAIL	
L1	RADIO DESIGN LABS D-CUB-LOCAL MUSIC INPUT	DECORA	<1 LB	3/AV-301	2G BOX W/12 MUDGING	RECEPTACLE HEIGHT	(1) DEDICATED 120V/240V CIRCUIT	QUAD OUTLET LOCATED ADJACENT TO 1 FOR BANDUP POWER (DEDICATED OUTLET)	
TP	MICRO TOUCH M1-156C ANDROID TOUCH COMPUTER FOR AV CONTROL	9" x 15" x 1.5"	4.5 LBS	10/AV-301	FSR PWB-200	38" AFF	DUPLEX OUTLET INSIDE BACKBOX	MOUNT DUPLEX IN TOP OR BOTTOM 3G INDOOR OUT. CAT6 VIA 3/4" STUB-UP	
PATCH PANEL IN RACK	VER-043-384/6R/2U-2 QUANTITY	-	-	-	-	-	-	-	
WALL PLATE	ATLAS WESP-MX31	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	ATLAS C-25V	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	SIMPLIFIED SMP-TX1WKT	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	ATLAS C-148T-B	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	

DESCRIPTION OF TASK	RESPONSIBLE PARTY			
	AV	EC	GC	OWNER
Provide ceiling speaker mudrugs	x			
Install and wire equipment rack	x	x		
Provide and install ceiling speakers	x			
Provide equipment rack (installed by E.C.)	x			
Provide "NCC" wall control and Bluetooth input (installed by E.C.)	x			
Pre-configure, program, and test equipment rack and controls onsite	x			
Perform final installation and commissioning onsite	x			
Responsible for fully functional system after items below are provided	x			
Install EMT conduit and backboxes per AV drawings		x		
Provide cabling per AV drawings		x		
Obtain all necessary low voltage permits if required			x	
Install ceiling speaker mudrugs and speakers			x	
Coordinate space for RK equipment rack				x
Receive and secure rack and speakers onsite				x
Field verify required clearance above finished ceiling at each speaker position				x
Provide 1/4" plywood backing as noted on AV drawings				x
Confirm exact location for RK equipment rack and WC wall controller				x
Coordinate ISP (Internet Service Provider), Network Switch installation and configuration	x			
Provide NC contact closure from fire alarm panel for sound system muting (only if required by AHJ)				x
Provide a credenza (OTS) to store the rack				x
Provide and install POS equipment	x			
Provide and install mounts for kitchen screens	x			x
Provide and install job and networking equipment	x			
Coordinate installation with Security vendor (ADT)	x			
Coordinate DTV installation	x			
Provide and install CCTV	x			
Provide TVs				x
TV Mounts provided and installed				x

CABLE SEPARATION SCHEDULE						
	TYPE L	TYPE S (ALL)	TYPE D	N/A		
	LINE AUDIO	SPEAKER	CAT6 DATA	120V POWER		
TYPE L	LINE AUDIO	NONE	2"	2"	6"	
TYPE S (ALL)	SPEAKER	2"	NONE	4"	6"	
TYPE D	CAT6	2"	4"	NONE	6"	
N/A	120V POWER	6"	4"	6"	NONE	

CABLE LEGEND						
TYPE	DESCRIPTION	MODEL	OD	JACKET	INSULATION	RATING
D	23 AWG CATEGORY 6 UNSHIELDED TWISTED PAIR (UTP)	WINDY CITY WIRE CAT6P	.215"	PVC	FEP, PE	CMP
S	14 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 14-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
SW	12 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 12-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
A	RG8X/U 50 OHM COAXIAL CABLE WITH BNC	SHURE UA850	0.315"	PVC	FEP	CM
L	22 AWG 2 COND FOIL SHIELD	WINDY CITY WIRE 22-02SPKBLK	0.126"	PVC	PVC	CMP

#### ABBREVIATIONS:

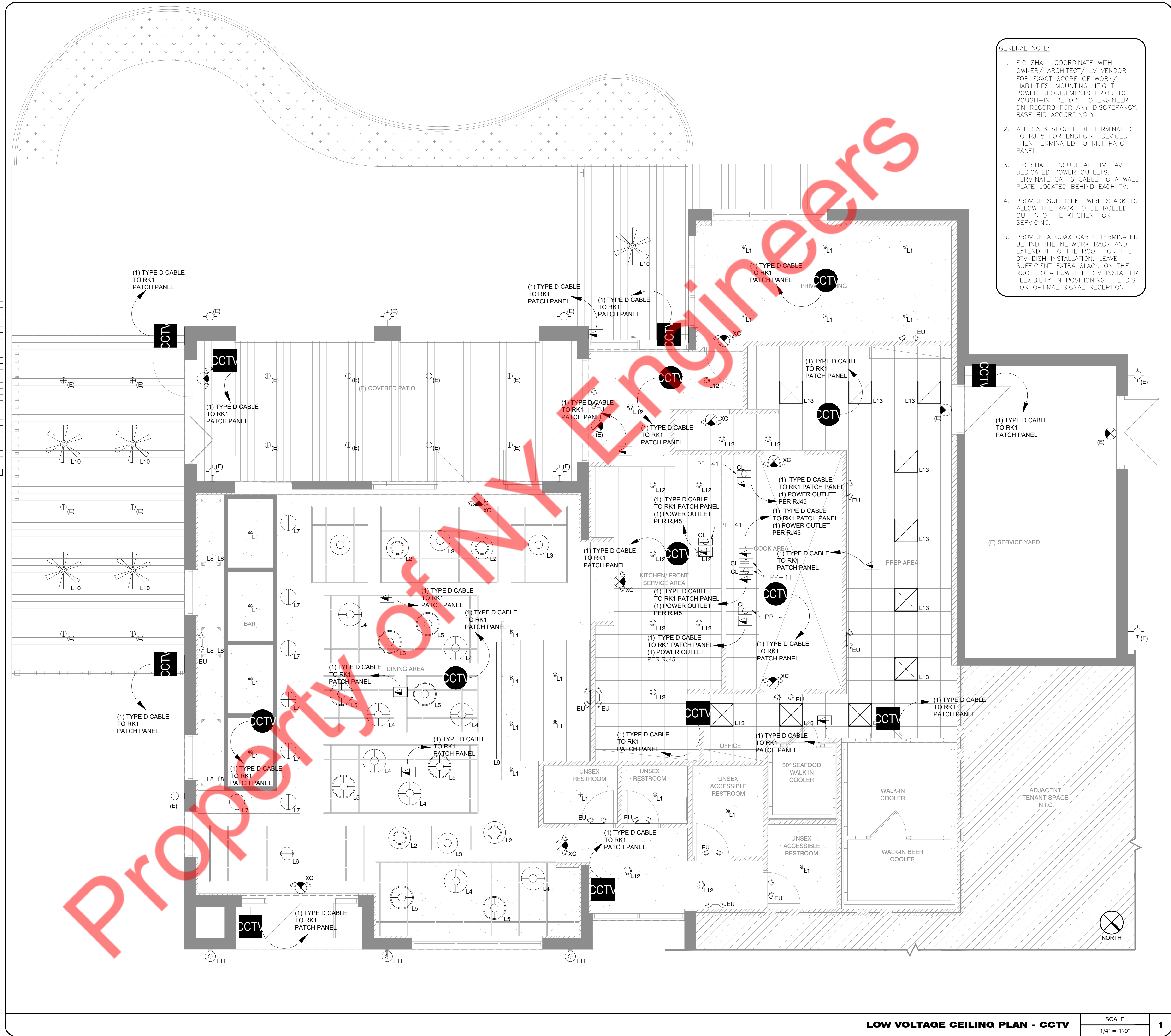
- CMP = COMMUNICATIONS MULTIPURPOSE CABLE, PLENUM-RATED.
- CL3P = CLASS 3 POWER-LIMITED CIRCUITS, PLENUM-RATED.
- CM = COMMUNICATIONS MULTIPURPOSE CABLE.

#### CABLE SEPARATION NOTES:

- ALL NOTES ABOVE REFER TO FREE-AIR LOW VOLTAGE CABLING AND 120V/240V POWER IN FULLY BONDED, FERROUS METAL CONDUIT. AV TO PROVIDE WRITTEN DIRECTION FOR OTHER SCENARIOS.
- WHERE THESE DISTANCES CANNOT BE MAINTAINED, PROVIDE FERROUS METAL CONDUIT FOR ALL LOW VOLTAGE CABLING.
- CABLES OF DIFFERENT SIGNAL TYPES CANNOT SHARE CONDUIT.

#### AV NOTES:

- ALL CABLES HOMERUN TO AV RACK RK1/NVR 32 CH UNLESS NOTED OTHERWISE.
- PROVIDE EMT CONDUIT FOR ALL EXPOSED OR INACCESSIBLE CABLING.
- MAINTAIN CONDUIT SEPARATION PER SCHEDULE ON AV-202 DETAIL 2 BETWEEN DIFFERENT SIGNAL TYPES.
- COORDINATE COLOR OF ALL EXPOSED CABLING WITH ARCHITECT. CABLE SPECS LISTED IN CABLE LEGEND ARE INCOMPLETE. ANY SUBSTITUTION MUST BE CROSS-REFERENCED WITH THE PART NUMBERS ABOVE AND APPROVED BY AV.
- SEE DRAWING DETAILS FOR SPEAKER MOUNTING DETAILS.



#### GENERAL NOTE:

- E.C. SHALL COORDINATE WITH OWNER/ ARCHITECT/ LV VENDOR FOR EXACT SCOPE OF WORK/ LIABILITIES, MOUNTING HEIGHT, POWER REQUIREMENTS PRIOR TO ROUGH-IN. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.
- ALL CAT6 SHOULD BE TERMINATED TO RJ45 FOR ENDPOINT DEVICES. THEN TERMINATED TO RK1 PATCH PANEL.
- E.C. SHALL ENSURE ALL TV HAVE DEDICATED POWER OUTLETS. TERMINATE CAT 6 CABLE TO A WALL PLATE LOCATED BEHIND EACH TV.
- PROVIDE SUFFICIENT WIRE SLACK TO ALLOW THE RACK TO BE ROLLED OUT INTO THE KITCHEN FOR SERVICING.
- PROVIDE A COAX CABLE TERMINATED BEHIND THE NETWORK RACK AND EXTEND IT TO THE ROOF FOR THE DTV DISH INSTALLATION. LEAVE SUFFICIENT EXTRA SLACK ON THE ROOF TO ALLOW THE DTV INSTALLER FLEXIBILITY IN POSITIONING THE DISH FOR OPTIMAL SIGNAL RECEPTION.

ZUNZIBAR

#### REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

LOW VOLTAGE  
CEILING PLAN -  
CCTV

E-5

LOW VOLTAGE CEILING PLAN - CCTV

SCALE

1/4" = 1'-0"

1



DEVICE LEGENDS									
ID	DESCRIPTION	DIMENSIONS (HxWxD)	WEIGHT	DETAIL	BOX TYPE	CL MOUNTING	POWER	NOTES	
RK1	SANUS CPE2144-44U	84.8" x 23.6" x 23.7"	240 LBS	1/AV-302	CABLE TRAY ABOVE	N/A	(3) DEDICATED 120V/20A CIRCUITS	PROVIDE DEDICATED #6 GROUND BONDING CONDUCTOR	
S1	BIAMP EX-SB-UB-B	12.68" x 16.61" x 10.28"	35.27 LBS	4/AV-301	2G BOX	SEE FLOOR PLAN		TWO-WAY FULL RANGE PASSIVE LOUDSPEAKER	
S2	BIAMP DK-IC4-W	7.95" x (D) 5.7"	3.5 LBS	8/AV-301	4" OCTAGON BOX	SEE DETAIL			
S3	BIAMP DK-ICB-W	VARIES	VARIES	8/AV-301	-	SEE DETAIL			
S4	ACOUSTISCAPE TRU-AS-1	VARIES	VARIES	DETAIL	BOTTOM OF TRUSS			HIGH POWER SUB-BASS	
SB1	BIAMP IS6-212B	17.4" x 28.19" x 18.9"	75.6 LBS	DETAIL PENDING	2G BOX	BOTTOM OF TRUSS			
TV1	55" 2000NR SYLVOK OUTDOOR	VARIES	VARIES	1/AV-301	2G BOX W/16 MOUNTING	SEE FLOOR PLAN	DUPLEX OUTLET PER DETAIL	PROVIDE 3/4" PLYWOOD BACKING, DUPLEX OUTLET, AND CONDUIT PER DETAIL	
TV2	55" 1000NR SYLVOK OUTDOOR	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV3	55" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV4	65" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
C1	OPTIMAL AUDIO ZONE PAD 1-1 ZONE WALL CONTROL	3.39" x 5.75" x 1.35"	<1 LB		3G BOX	SEE HEIGHT			
C4	OPTIMAL AUDIO ZONE PAD 4-4 ZONE WALL CONTROL WITH LOCAL INPUT	3.39" x 5.75" x 1.35"	<1 LB	2/AV-302	3G BOX	SEE DETAIL	DEDICATED 120V/20A QUAD OUTLET	PROVIDE 3G BOX AT BOTH 48" AFF & 18" AFF WITH QUAD OUTLET PER DETAIL	
L1	RADIO DESIGN LABS D-CUB3- LOCAL MUSIC INPUT	DECORA	<1 LB	3/AV-301	2G BOX W/16 MOUNTING	RECEPTACLE HEIGHT	(1) DEDICATED 120V/20A CIRCUIT	QUAD OUTLET LOCATED ADJACENT TO L1 FOR BANG/OI POWER (DEDICATED OUTLET)	
TP	MICRO TOUCH M1-156C ANDROID TOUCH COMPUTER FOR AV CONTROL	9" x 15" x 1.5"	4.5 LBS	10/AV-301	FSR PWB-200	38" AFF	DUPLEX OUTLET INSIDE BACKBOX	MOUNT DUPLEX IN TOP OR BOTTOM 3G W/OUTLET, CAT6 VIA 3/4" STUB-UP	
PATCH PANEL IN RK1	VER-043-38A/42U-2 QUANTITY	-	-	-	-	-	-	-	
WALL PLATE	ATLAS WESD-M0K31	-	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER
WALL PLATE	ATLAS C-25V	-	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER
WALL PLATE	SIMPLIFIED SMP-100WKT	-	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER
WALL PLATE	ATLAS C-14BT-B	-	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER

DESCRIPTION OF TASK	RESPONSIBLE PARTY				
	AV	EC	GC	OWNER	FIRE
Provide ceiling speaker mudrings	x				
Install and wire equipment rack	x	x			
Provide and install ceiling speakers	x				
Provide equipment rack(Installed by E.C)	x				
Provide "WC" wall control and bluetooth input(Installed by E.C)	x				
Pre-configure, program, and test equipment rack and controls onsite	x				
Perform final installation and commissioning onsite	x				
Responsible for fully functional system after items below are provided	x				
Install EMT conduit and backboxes per AV drawings		x			
Provide cabling per AV drawings		x			
Obtain all necessary low voltage permits if required			x		
Install ceiling speaker mudrings and speakers			x		
Coordinate space for RK equipment rack			x		
Receive and secure rack and speakers onsite			x		
Field verify required clearance above finished ceiling at each speaker position			x		
Provide 3-4" physical backing as noted on AV drawings				x	
Confirm exact location for RK equipment rack and WC wall controller				x	
Coordinate ISP (Internet Service Provider), Network Switch installation and configuration	x				x
Provide NC contact closure from fire alarm panel for sound system muting (only if required by AHJ)					x
Provide a credenza (CPE) to store the rack				x	
Provide and install POS equipment	x				
Provide and install mounts for kitchen screens	x		x		
Provide and install job and networking equipment	x				
Coordinate installation with Security vendor (ADT)	x				
Coordinate DTV installation	x				
Provide and install CCTV	x				
Provide TV's				x	
TV Mounts provided and installed				x	

CABLE SEPARATION SCHEDULE					
	TYPE L	TYPE S (ALL)	TYPE D	N/A	
	LINE AUDIO	SPEAKER	CAT6 DATA	120V POWER	
TYPE L	LINE AUDIO	NONE	2"	2"	6"
TYPE S (ALL)	SPEAKER	2"	NONE	4"	6"
TYPE D	CAT6	2"	4"	NONE	6"
N/A	120V POWER	6"	4"	6"	NONE

CABLE LEGEND						
TYPE	DESCRIPTION	MODEL	OD	JACKET	INSULATION	RATING
D	23 AWG CATEGORY 6 UNSHIELDED TWISTED PAIR (UTP)	WINDY CITY WIRE CAT6P	.215"	PVC	FEP, PE	CMP
S	14 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 14-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
SW	12 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 12-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
A	RG8X/U 50 OHM COAXIAL CABLE WITH BNC	SHURE UA850	0.315"	PVC	FEP	CM
L	22 AWG 2 COND FOIL SHIELD	WINDY CITY WIRE 22-02SPKBLK	0.126"	PVC	PVC	CMP

#### ABBREVIATIONS:

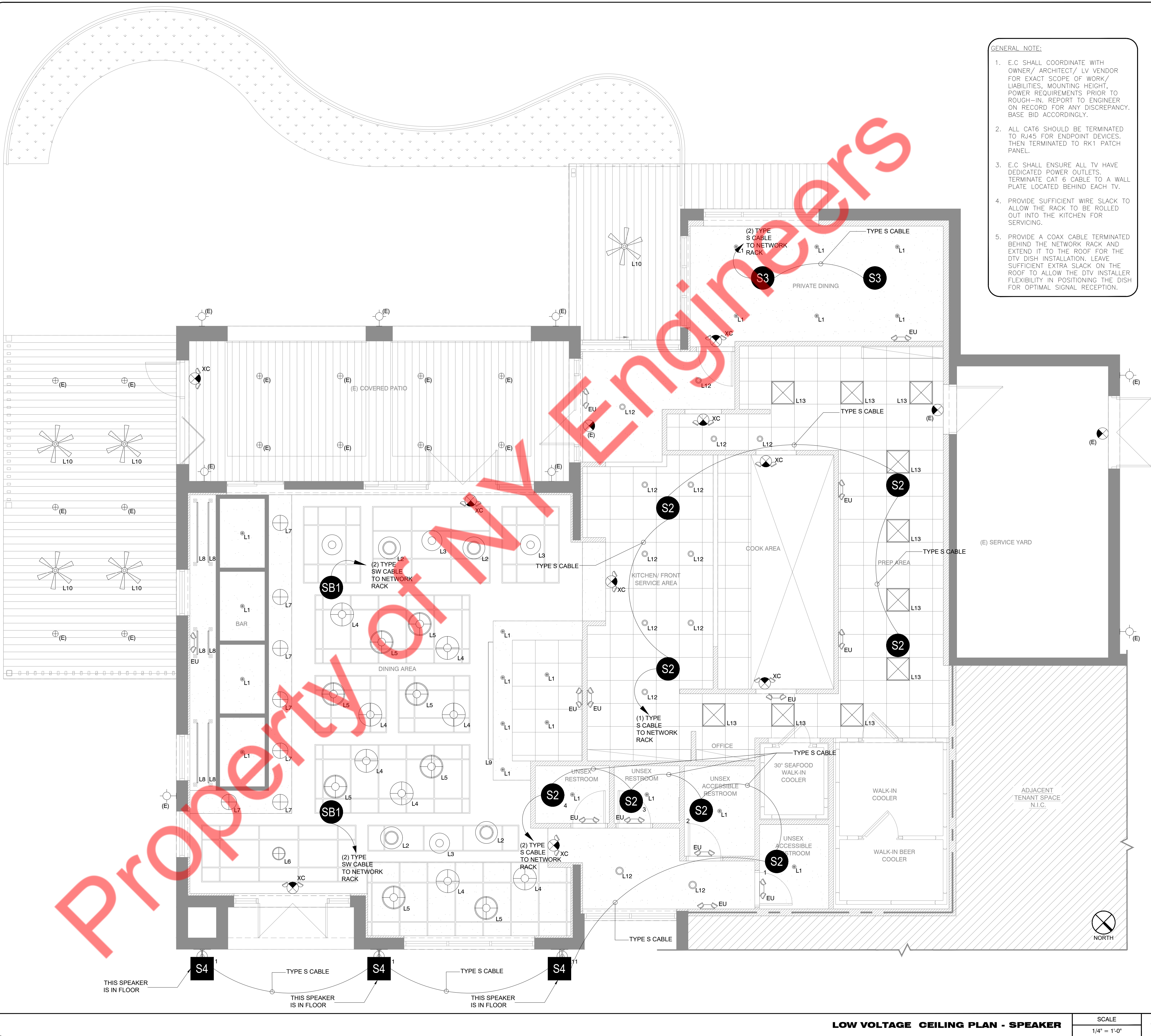
- CMP = COMMUNICATIONS MULTIPURPOSE CABLE, PLENUM-RATED.
- CL3P = CLASS 3 POWER-LIMITED CIRCUITS, PLENUM-RATED.
- CM = COMMUNICATIONS MULTIPURPOSE CABLE.

#### CABLE SEPARATION NOTES:

- ALL NOTES ABOVE REFER TO FREE-AIR LOW VOLTAGE CABLING AND 120V/240V POWER IN FULLY BONDED, FERROUS METAL CONDUIT, AV TO PROVIDE WRITTEN DIRECTION FOR OTHER SCENARIOS.
- WHERE THESE DISTANCES CANNOT BE MAINTAINED, PROVIDE FERROUS METAL CONDUIT FOR ALL LOW VOLTAGE CABLING.
- CABLES OF DIFFERENT SIGNAL TYPES CANNOT SHARE CONDUIT.

#### AV NOTES:

- ALL CABLES HOMERUN TO AV RACK RK1/NVR 32 CH UNLESS NOTED OTHERWISE.
- PROVIDE EMT CONDUIT FOR ALL EXPOSED OR INACCESSIBLE CABLING.
- MAINTAIN CONDUIT SEPARATION PER SCHEDULE ON AV-202 DETAIL 2 BETWEEN DIFFERENT SIGNAL TYPES.
- COORDINATE COLOR OF ALL EXPOSED CABLING WITH ARCHITECT. CABLE SPECS LISTED IN CABLE LEGEND ARE INCOMPLETE. ANY SUBSTITUTION MUST BE CROSS-REFERENCED WITH THE PART NUMBERS ABOVE AND APPROVED BY AV.
- SEE DRAWING DETAILS FOR SPEAKER MOUNTING DETAILS.



#### GENERAL NOTE:

- E.C SHALL COORDINATE WITH OWNER/ ARCHITECT/ LV VENDOR FOR EXACT SCOPE OF WORK/ LIABILITIES, MOUNTING HEIGHT, POWER REQUIREMENTS PRIOR TO ROUGH-IN. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.
- ALL CAT6 SHOULD BE TERMINATED TO RJ45 FOR ENDPOINT DEVICES. THEN TERMINATED TO RK1 PATCH PANEL.
- E.C SHALL ENSURE ALL TV HAVE DEDICATED POWER OUTLETS. TERMINATE CAT 6 CABLE TO A WALL PLATE LOCATED BEHIND EACH TV.
- PROVIDE SUFFICIENT WIRE SLACK TO ALLOW THE RACK TO BE ROLLED OUT INTO THE KITCHEN FOR SERVICING.
- PROVIDE A COAX CABLE TERMINATED BEHIND THE NETWORK RACK AND EXTEND IT TO THE ROOF FOR THE DTV DISH INSTALLATION. LEAVE SUFFICIENT EXTRA SLACK ON THE ROOF TO ALLOW THE DTV INSTALLER FLEXIBILITY IN POSITIONING THE DISH FOR OPTIMAL SIGNAL RECEPTION.

#### LOW VOLTAGE CEILING PLAN - SPEAKER

SCALE  
1/4" = 1'-0"

1

ZUNZIBAR

#### REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

LOW VOLTAGE  
CEILING PLAN -  
SPEAKER

E-5.1

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT



ID		DESCRIPTION	DEVICE SPECS			DEVICE LEGENDS			BOX INSTALL	POWER	NOTES
			DIMENSIONS (HxWxD)	WEIGHT	DETAIL	BOX TYPE	CL MOUNTING				
RK1		SANUS CFX144-44U	84.8" x 23.6" x 23.7"	240 LBS	1/AV-302	CABLE TRAY ABOVE	N/A	(3) DEDICATED 120V/20A CIRCUITS		PROVIDE DEDICATED #6 GROUND BONDING CONDUCTOR	
S1		BIAMP EX-58-UB-B	12.68" x 16.61" x 10.28"	35.27 LBS	4/AV-301	2G BOX	SEE FLOOR PLAN			TWO-WAY, FULL RANGE, PASSIVE LOUDSPEAKER	
S2		BIAMP DX-IC4-W	7.95" x (D) 5.7"	3.5 LBS	8/AV-301	4" OCTAGON BOX	SEE DETAIL				
S3		BIAMP DX-IC8-W	VARIABLES	VARIABLES	8/AV-301	-	SEE DETAIL				
S4		ACOUSTOSCAPE TRU-AS-1	VARIABLES	VARIABLES	-	-	-				
S81		BIAMP IS6-2128	17.4" x 28.19" x 18.9"	75.6 LBS	DETAIL PENDING	2G BOX	BOTTOM OF TRUSS			HIGH POWER SUB-BASS LOUDSPEAKER	
TV1		55" 2000N6 SYLVOK OUTDOOR	VARIABLES	VARIABLES	1/AV-301	2G BOX W/45 MOUNTING	SEE FLOOR PLAN	DUPEX OUTLET PER DETAIL		PROVIDE 3/4" PLYWOOD BACKING, DUPEX OUTLET, AND CONDUIT PER DETAIL	
TV2		55" 1000N6 SYLVOK OUTDOOR	VARIABLES	VARIABLES			SEE DETAIL	DUPEX OUTLET PER DETAIL			
TV3		55" INDOOR TV	VARIABLES	VARIABLES			SEE DETAIL	DUPEX OUTLET PER DETAIL			
TV4		65" INDOOR TV	VARIABLES	VARIABLES			SEE DETAIL	DUPEX OUTLET PER DETAIL			
C1		OPTIMAL AUDIO ZONE PAD 1-1 ZONE WALL CONTROL	3.39" x 5.75" x 1.55"	<1 LB		3G BOX	SEE HEIGHT				
C4		OPTIMAL AUDIO ZONE PAD 4-4 ZONE WALL CONTROL WITH LOCAL INPUT	3.39" x 5.75" x 1.55"	<1 LB	2/AV-301	3G BOX	SEE DETAIL	DEDICATED 120V/20A QUAD OUTLET		PROVIDE 3G BOX AT BOTH 48" AFF & 38" AFF WITH QUAD OUTLET PER DETAIL	
L1		RADIO DESIGN LABS D-CU3-3 LOCAL MUSIC INPUT	DECORA	<1 LB	3/AV-301	2G BOX W/45 MOUNTING	RECEPTACLE HEIGHT	(1) DEDICATED 120V/20A CIRCUIT		QUAD OUTLET LOCATED ADJACENT TO 1-1 FOR BANDWIDTH POWER (DEDICATED OUTLET)	
TP		MICRO TOUCH M1-156C ANDROID TOUCH COMPUTER FOR AV CONTROL	9" x 15" x 1.5"	4.5 LBS	10/AV-301	F58 PWB-200	38" AFF	DUPEX OUTLET INSIDE BACKBOX		MOUNT DUPEX IN TOP OR BOTTOM IS MOUNTOUT, CAT6 VIA 3/4" STUB-UP	
PATCH PANEL IN RACK		VER-043-384/82U-2 QUANTITY	-	-	-	-	-	-			
WALL PLATE		ATLAS WESD-MIX31	-	-	-	-	-	-		COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE		ATLAS C ZSV	-	-	-	-	-	-		COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE		SIMPLIFIED SMP-TXIWKT	-	-	-	-	-	-		COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE		ATLAS C-T4BT-B	-	-	-	-	-	-		COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	

DESCRIPTION OF TASK	RESPONSIBLE PARTY			
	AV	EC	GC	OWNER
Provide ceiling speaker mudrings	x			
Install and wire equipment rack	x	x		
Provide and install ceiling speakers	x			
Provide equipment rack (installed by E.C.)	x			
Provide "WC" wall control and Bluetooth input (installed by E.C.)	x			
Pre-configure, program, and test equipment rack and controls onsite	x			
Perform final installation and commissioning onsite	x			
Responsible for fully functional system after items below are provided	x			
Install EMT conduit and backboxes per AV drawings	x			
Provide cabling per AV drawings	x			
Obtain all necessary low voltage permits if required	x			
Install ceiling speaker mudrings and speakers	x			
Coordinate space for RK equipment rack			x	
Receive and secure rack and speakers onsite			x	
Field verify required clearance above finished ceiling at each speaker position			x	
Provide 3/4" plywood backing as noted on AV drawings			x	
Confirm exact location for RK equipment rack and WC wall controller			x	
Coordinate ISP (Internet Service Provider), Network Switch installation and configuration	x			
Provide NC contact closure from fire alarm panel for sound system muting (only if required by AHJ)			x	x
Provide a credenza (OFE) to store the rack			x	
Provide and install POS equipment	x			
Provide and install mounts for kitchen screens	x		x	
Provide and install tools and networking equipment	x			
Coordinate installation with Security vendor (ADT)	x			
Coordinate DTV installation	x			
Provide and install CCTV	x			
Provide TVs				x
TV Mounts provided and installed				x

CABLE SEPARATION SCHEDULE					
		TYPE L	TYPE S (ALL)	TYPE D	N/A
		LINE AUDIO	SPEAKER	CAT6 DATA	120V POWER
TYPE L	LINE AUDIO	NONE	2"	2"	6"
TYPE S (ALL)	SPEAKER	2"	NONE	4"	6"
TYPE D	CAT6	2"	4"	NONE	6"
N/A	120V POWER	6"	4"	6"	NONE

CABLE LEGEND						
TYPE	DESCRIPTION	MODEL	OD	JACKET	INSULATION	RATING
D	23 AWG CATEGORY 6 UNSHIELDED TWISTED PAIR (UTP)	WINDY CITY WIRE CAT6P	.215"	PVC	FEP, PE	CMP
S	14 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 14-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
SW	12 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 12-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
A	RG8X/U 50 OHM COAXIAL CABLE WITH BNC	SHURE UAB50	0.315"	PVC	FEP	CM
L	22 AWG 2 COND FOIL SHIELD	WINDY CITY WIRE 22-02SPKBLK	0.126"	PVC	PVC	CMP

ABBREVIATIONS:

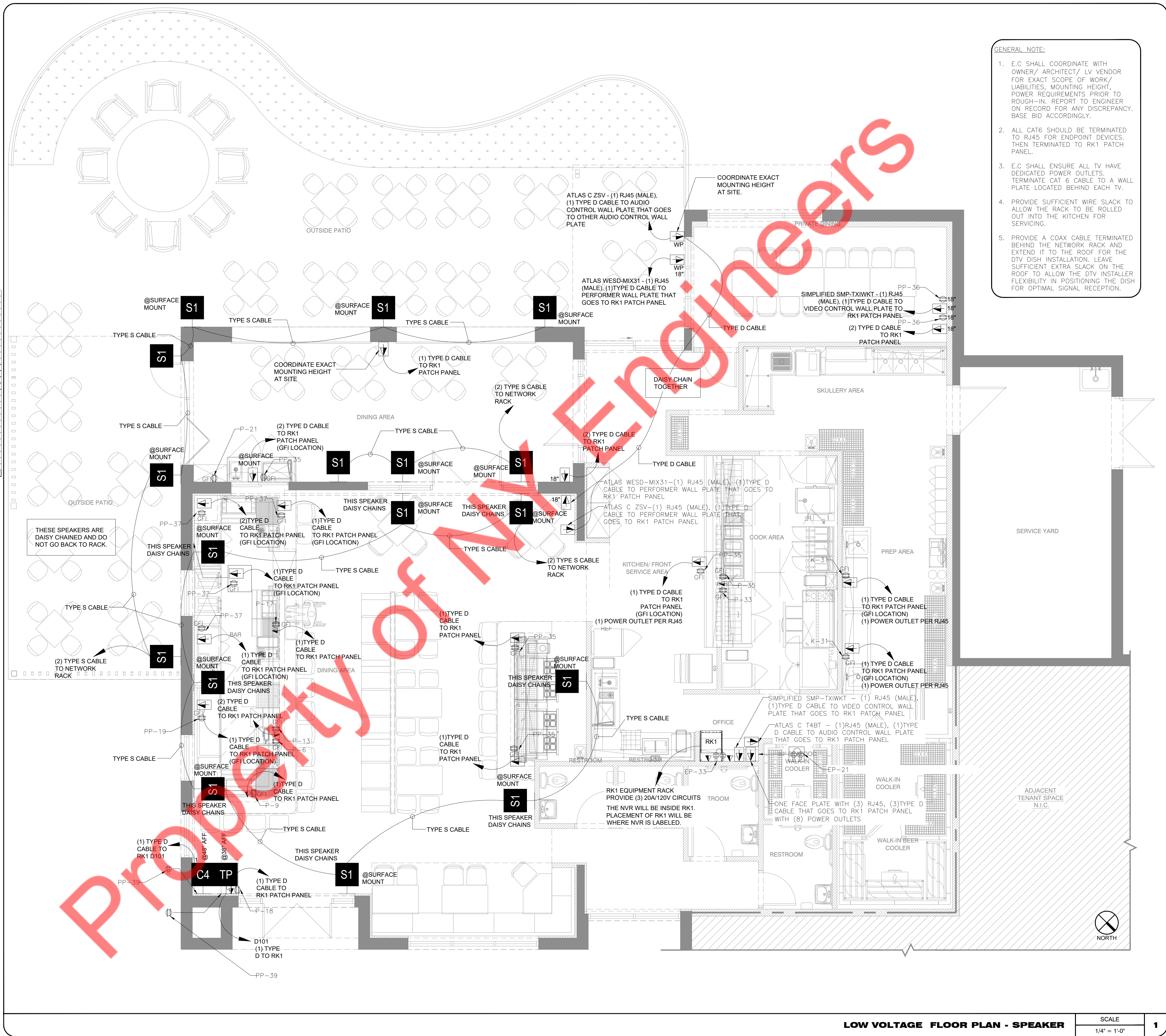
1. CMP = COMMUNICATIONS MULTIPURPOSE CABLE, PLENUM-RATED.
2. CL3P = CLASS 3 POWER-LIMITED CIRCUITS, PLENUM-RATED.
3. CM = COMMUNICATIONS MULTIPURPOSE CABLE.

CABLE SEPARATION NOTES:

1. ALL NOTES ABOVE REFER TO FREE-AIR LOW VOLTAGE CABLING AND 120V/240V POWER IN FULLY BONDED, FERROUS METAL CONDUIT. AV TO PROVIDE WRITTEN DIRECTION FOR OTHER SCENARIOS.
2. WHERE THESE DISTANCES CANNOT BE MAINTAINED, PROVIDE FERROUS METAL CONDUIT FOR ALL LOW VOLTAGE CABLING.
3. CABLES OF DIFFERENT SIGNAL TYPES CANNOT SHARE CONDUIT.

AV NOTES:

1. ALL CABLES HOMERUN TO AV RACK RK1/NVR 32 CH UNLESS NOTED OTHERWISE.
2. PROVIDE EMT CONDUIT FOR ALL EXPOSED OR INACCESSIBLE CABLING.
3. MAINTAIN CONDUIT SEPARATION PER SCHEDULE ON AV-202 DETAIL 2 BETWEEN DIFFERENT SIGNAL TYPES.
4. COORDINATE COLOR OF ALL EXPOSED CABLING WITH ARCHITECT. CABLE SPECS LISTED IN CABLE LEGEND ARE INCOMPLETE. ANY SUBSTITUTION MUST BE CROSS-REFERENCED WITH THE PART NUMBERS ABOVE AND APPROVED BY AV.
5. SEE DRAWING DETAILS FOR SPEAKER MOUNTING DETAILS.



NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:	
07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025  
MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA  
ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

LOW VOLTAGE FLOOR PLAN - SPEAKER

E-6



DEVICE LEGENDS									
ID	DESCRIPTION	DEVICE SPECS		DETAIL	BOX TYPE	CL MOUNTING	POWER	NOTES	
		DIMENSIONS (HxWxD)	WEIGHT						
RK1	SANUS CTR2144-44U	84.8" x 23.6" x 23.7"	240 LBS	1/AV-301	CABLE TRAY ABOVE	N/A	(3) DEDICATED 120V/20A CIRCUITS	PROVIDE DEDICATED #6 GROUND BONDING CONDUCTOR	
S1	BIAMP EX-SB-UB-B	12.68" x 16.61" x 10.28"	35.27 LBS	4/AV-301	2G BOX	SEE FLOOR PLAN		TWO-WAY, FULL RANGE, PASSIVE LOUDSPEAKER	
S2	BIAMP DX-IC4-W	7.95" x (D) 5.7"	3.5 LBS	8/AV-301	4" OCTAGON BOX	SEE DETAIL			
S3	BIAMP DX-ICB-W	VARIES	VARIES	8/AV-301	-	SEE DETAIL			
S4	ACOUSTICSCAPE TRU-AS-1	VARIES	VARIES	-	-	-			
S81	BIAMP IS6-212B	17.4" x 28.19" x 18.9"	75.6 LBS	DETAIL PENDING	2G BOX	BOTTOM OF TRUSS		HIGH POWER SUB-BASS LOUDSPEAKER	
TV1	55" 2000N1 SYLVOK OUTDOOR	VARIES	VARIES	1/AV-301	2G BOX W/16 MOUNTING	SEE FLOOR PLAN	DUPLEX OUTLET PER DETAIL	PROVIDE 3/4" PLYWOOD BACKING, DUPLEX OUTLET, AND CONDUIT PER DETAIL	
TV2	55" 1000N1 SYLVOK OUTDOOR	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV3	55" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
TV4	65" INDOOR TV	VARIES	VARIES			SEE DETAIL	DUPLEX OUTLET PER DETAIL		
C1	OPTIMAL AUDIO ZONE PAD 1-1 ZONE WALL CONTROL	3.39" x 5.75" x 1.55"	< 1 LB		3G BOX	SEE HEIGHT			
C4	OPTIMAL AUDIO ZONE PAD 4-4 ZONE WALL CONTROL WITH LOCAL INPUT	3.39" x 5.75" x 1.55"	< 1 LB	2/AV-301	3G BOX	SEE DETAIL	DEDICATED 120V/20A QUAD OUTLET	PROVIDE 3G BOX AT BOTH 48" AFF & 38" AFF WITH QUAD OUTLET PER DETAIL	
L1	RADIO DESIGN LABS D-CU3-LOCAL MUSIC INPUT	DECORA	< 1 LB	3/AV-301	2G BOX W/10 MOUNTING	RECEPTACLE HEIGHT	(1) DEDICATED 120V/20A CIRCUIT	QUAD OUTLET LOCATED ADJACENT TO L1 FOR BAND/DI POWER (DEDICATED OUTLET)	
TP	MICRO TOUCH M1-586C ANDROID TOUCH COMPUTER FOR AV CONTROL	9" x 15" x 1.5"	4.5 LBS	10/AV-301	FSR PWB-200	38" AFF	DUPLEX OUTLET INSIDE BACKBOX	MOUNT DUPLEX IN TOP OR BOTTOM 3G INDOOR CAT6 VIA 3/4" STUB-UP	
PATCH PANEL IN RK1	VER-043-384/62/DU-2 QUANTITY	-	-	-	-	-	-	-	
WALL PLATE	ATLAS WESD-MK31	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	ATLAS C-25V	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	SIMPLIFIED SMP-TW0WKT	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	
WALL PLATE	ATLAS C-14BT-B	-	-	-	-	-	-	COORDINATE EXACT QUANTITY WITH LV VENDOR/OWNER	

DESCRIPTION OF TASK	RESPONSIBLE PARTY			
	AV	EC	GC	OWNER
Provide ceiling speaker mudrings	x	x		
Install and wire equipment rack	x			
Provide and install ceiling speakers	x			
Provide equipment rack(Installed by E.C)	x			
Provide "WU" wall control and bluetooth inputs(Installed by E.C)	x			
Pre-configure, program, and test equipment rack and controls onsite	x			
Perform final installation and commissioning onsite	x			
Responsible for fully functional system after items below are provided	x	x		
Install EMT conduit and backboxes per AV drawings	x			
Provide cabling per AV drawings	x			
Obtain all necessary low voltage permits if required	x			
Install ceiling speaker mudrings and speakers		x		
Coordinate space for RK equipment rack		x		
Receive and secure rack and speakers onsite		x		
Field verify required clearance above finished ceiling at each speaker position		x		
Provide 3/4" plywood backing as noted on AV drawings			x	
Confirm exact location for RK equipment rack and WC wall controller			x	
Coordinate ISP (Internet Service Provider), Network Switch installation and configuration	x			
Provide NC contact closure from fire alarm panel for sound system muting (only if required by AHJ)				x
Provide a credenza (DPE) to store the rack				x
Provide and install POS equipment	x			
Provide and install mounts for kitchen screens	x		x	
Provide and install Jolt and networking equipment	x			
Coordinate installation with Security vendor (ADT)	x			
Coordinate DTV installation	x			
Provide and install CCTV	x			
Provide TVs				x
TV Mounts provided and installed				x

CABLE SEPARATION SCHEDULE						
		TYPE L	TYPE S (ALL)	TYPE D	N/A	
		LINE AUDIO	SPEAKER	CAT6 DATA	120V POWER	
TYPE L	LINE AUDIO	NONE	2"	2"	6"	
TYPE S (ALL)	SPEAKER	2"	NONE	4"	6"	
TYPE D	CAT6	2"	4"	NONE	6"	
N/A	120V POWER	6"	4"	6"	NONE	

CABLE LEGEND						
TYPE	DESCRIPTION	MODEL	OD	JACKET	INSULATION	RATING
D	23 AWG CATEGORY 6 UNSHIELDED TWISTED PAIR (UTP)	WINDY CITY WIRE CAT6P	.215"	PVC	FEP, PE	CMP
S	14 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 14-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
SW	12 AWG 2 CONDUCTOR TWISTED BARE COPPER	WINDY CITY WIRE 12-02P	.250"	PVC	PVC	UL LISTED (UL) CL3P
A	RG8X/U 50 OHM COAXIAL CABLE WITH BNC	SHURE UA850	0.315"	PVC	FEP	CM
L	COND FOIL SHIELD 22 AWG 2	WINDY CITY WIRE 22-02SPKBLK	0.126"	PVC	PVC	CMP

ABBREVIATIONS:

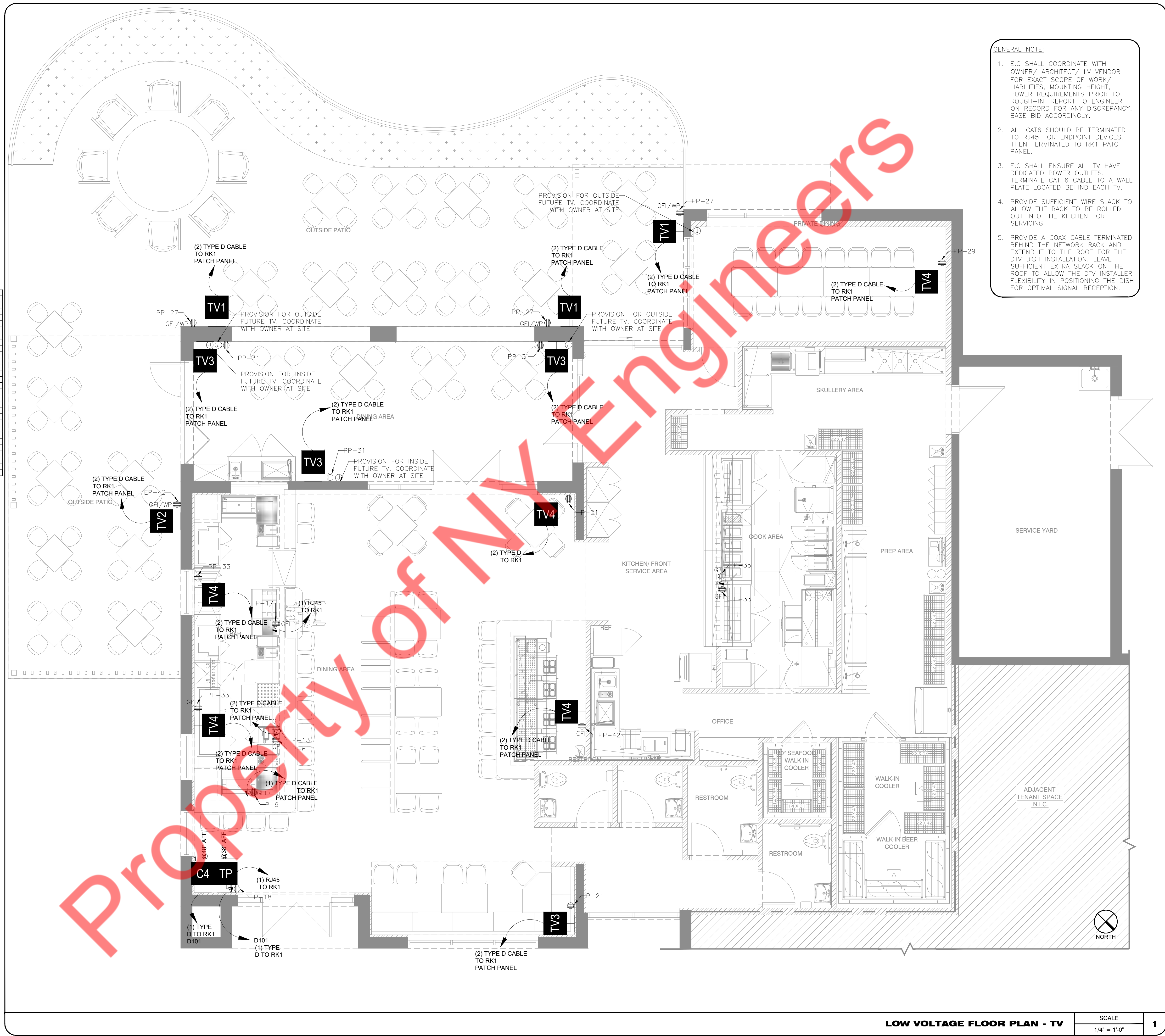
- CMP = COMMUNICATIONS MULTIPURPOSE CABLE, PLENUM-RATED.
- CL3P = CLASS 3 POWER-LIMITED CIRCUITS, PLENUM-RATED.
- CM = COMMUNICATIONS MULTIPURPOSE CABLE.

CABLE SEPARATION NOTES:

- ALL NOTES ABOVE REFER TO FREE-AIR LOW VOLTAGE CABLING AND 120V/240V POWER IN FULLY BONDED, FERROUS METAL CONDUIT. AV TO PROVIDE WRITTEN DIRECTION FOR OTHER SCENARIOS.
- WHERE THESE DISTANCES CANNOT BE MAINTAINED, PROVIDE FERROUS METAL CONDUIT FOR ALL LOW VOLTAGE CABLING.
- CABLES OF DIFFERENT SIGNAL TYPES CANNOT SHARE CONDUIT.

AV NOTES:

- ALL CABLES HOMERUN TO AV RACK RK1/NVR 32 CH UNLESS NOTED OTHERWISE.
- PROVIDE EMT CONDUIT FOR ALL EXPOSED OR INACCESSIBLE CABLING.
- MAINTAIN CONDUIT SEPARATION PER SCHEDULE ON AV-202 DETAIL 2 BETWEEN DIFFERENT SIGNAL TYPES.
- COORDINATE COLOR OF ALL EXPOSED CABLING WITH ARCHITECT. CABLE SPECS LISTED IN CABLE LEGEND ARE INCOMPLETE. ANY SUBSTITUTION MUST BE CROSS-REFERENCED WITH THE PART NUMBERS ABOVE AND APPROVED BY AV.
- SEE DRAWING DETAILS FOR SPEAKER MOUNTING DETAILS.



GENERAL NOTE:

- E.C SHALL COORDINATE WITH OWNER/ ARCHITECT/ LV VENDOR FOR EXACT SCOPE OF WORK/ LIABILITIES, MOUNTING HEIGHT, POWER REQUIREMENTS PRIOR TO ROUGH-IN. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.
- ALL CAT6 SHOULD BE TERMINATED TO RJ45 FOR ENDPOINT DEVICES. THEN TERMINATED TO RK1 PATCH PANEL.
- E.C SHALL ENSURE ALL TV HAVE DEDICATED POWER OUTLETS. TERMINATE CAT 6 CABLE TO A WALL PLATE LOCATED BEHIND EACH TV.
- PROVIDE SUFFICIENT WIRE SLACK TO ALLOW THE RACK TO BE ROLLED OUT INTO THE KITCHEN FOR SERVICING.
- PROVIDE A COAX CABLE TERMINATED BEHIND THE NETWORK RACK AND EXTEND IT TO THE ROOF FOR THE DTV DISH INSTALLATION. LEAVE SUFFICIENT EXTRA SLACK ON THE ROOF TO ALLOW THE DTV INSTALLER FLEXIBILITY IN POSITIONING THE DISH FOR OPTIMAL SIGNAL RECEPTION.

LOW VOLTAGE FLOOR PLAN - TV

SCALE  
1/4" = 1'-0"

1

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

LOW VOLTAGE  
FLOOR PLAN - TV

E-6.1

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT



PANEL BOARDS:

PANEL: PP (NEW)										MOUNTING: RECESSED						
208Y/120		VOLTS,		3	PHASE,		4	WIRE		PANEL LOCATION: STORAGE						
MAIN CB: 600A		MLO:		NA		BUS:		600A		MIN,		FED FROM: EXISTING ELECTRICAL SERVICE				
NOTE: L : LIGHTING, R : RECEPTACLES, E:KITCHEN/EQUIPMENT:HVAC , M : MOTOR,WH:ELECTRIC WATR HEATER , C: REFRIGERATION, O : OTHER/MISC. (TYPICAL)																
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.		
						A	B	C								
1			H	11.65	3-3 + 1#8G, 1".	25.74			4-1/0 + 1#6G, 11/2".	14.10	O	PANEL P (NEW)	150-3P	2		
3	100-3P	RTU-30-T102A (EX)	H	11.65			24.69				13.05		O	4		
5			H	11.65				27.61			15.97		O	6		
7	20	GE RECEPTACLE	R	0.36	2#12, #12G, 3/4"	12.01			3-3 + 1#8G, 1".	11.65	H	RTU-30-T102B (EX)	100-3P	8		
9	20	RECEPTACLE BAR COUNTER - 1	R	0.72	2#12, #12G, 3/4"		12.37			11.65	H			10		
11	20	RECEPTACLE BAR COUNTER - 2	R	0.36	2#12, #12G, 3/4"			12.01		11.65	H			12		
13			O	14.80	4-1/0 + 1#6G, 11/2".	30.02			4-1/0 + 1#6G, 11/2".	15.23	O	PANEL K (NEW)	150-3P	14		
15	150-3P	PANEL EP (NEW)	O	12.77			27.97			15.21	O			16		
17			O	13.15				26.70		13.55	O			18		
19	20	CONDUIT STUBS -HEATER/FAN	H	1.00	2#12, #12G, 3/4"	2.00			2#12, #12G, 3/4"	1.00	M	GARAGE DOOR	20-2P	20		
21	20	CONDUIT STUBS -HEATER/FAN	H	1.00	2#12, #12G, 3/4"		2.00			1.00	M			22		
23	20	CONDUIT STUBS -HEATER/FAN	H	1.00	2#12, #12G, 3/4"			2.00		1.00	M			24		
25	20/5	CONDUIT STUBS -HEATER/FAN	H	1.00	2#12, #12G, 3/4"	2.00			2#12, #12G, 3/4"	1.00	M	GARAGE DOOR	20-2P	26		
27	20	RECEPTACLE - OUTSIDE PATIO TV'S	R	0.54	2#12, #12G, 3/4"		1.54			1.00	L			LIGHTING - TIKI TORCH	20	28
29	20	RECEPTACLE - PRIVATE DINNING TV'S	R	0.18	2#12, #12G, 3/4"			0.18						SPARE	20	30
31	20	RECEPTACLE-DINNING AREA TV'S	R	0.54	2#12, #12G, 3/4"	0.54					SPARE	20	32			
33	20	RECEPTACLE-DINNING AREA TV'S	R	0.36	2#12, #12G, 3/4"		0.36				SPARE	20	34			
35	20	RECEPTACLE-LV PROVISION	R	0.72	2#12, #12G, 3/4"			1.08	2#12, #12G, 3/4"	0.36	R	RECEPTACLE-CONVENIENCE , LV PROVISION	20	36		
37	20	RECEPTACLE-LV PROVISION	R	0.72	2#12, #12G, 3/4"	0.72					SPARE	20	38			
39	20	RECEPTACLE-LV PROVISION	R	0.54	2#12, #12G, 3/4"		0.54				SPARE	20	40			
41	20	RECEPTACLE-LV PROVISION	R	0.72	2#12, #12G, 3/4"			1.26	2#12, #12G, 3/4"	0.54	R	RECEPTACLE-CONVENIENCE , LV PROVISION	20	42		
TOTAL CONNECTED LOAD (KVA)						73.04	69.48	70.84								

PANEL: K (NEW)										MOUNTING: RECESSED						
208Y/120		VOLTS,		3		PHASE,		4		WIRE		PANEL LOCATION: STORAGE				
MAIN CB: NA		MLO: 150A		BUS: 225A		MIN,		FED FROM: EXISTING ELECTRICAL SERVICE								
NOTE: L: LIGHTING, R: RECEPTACLES, E: KITCHEN/EQUIPMENT: HVAC, M: MOTOR, W: ELECTRIC WATER HEATER, C: REFRIGERATION, O: OTHER/MISC. (TYPICAL)																
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.		
						A	B	C								
1	20	78_TILTING SKILLET	E	0.17	2#12, #12G, 3/4"	0.47			2#12, #12G, 3/4"	0.30	E	119_SODA DISPENSING SYSTEM	20	2		
3	20	120_CHILLER/ DRAFT BEER POWER PACK	E	0.84	2#12, #12G, 3/4"		1.14		2#12, #12G, 3/4"	0.30	E	119_SODA DISPENSING SYSTEM	20	4		
5	20	110_WALK IN COOLER	E	1.00	2#12, #12G, 3/4"			1.20	2#12, #12G, 3/4"	0.20	R	113_WALKIN COOLER EVAPORATE UNIT	20	6		
7	30-2P	109_ICE MACHINE/WATER FILTER	E	2.30	2#10, #10G, 3/4"	3.03			2#12, #12G, 3/4"	0.73	E	114_WALKIN COOLER CONDENSING UNIT	20-2P	8		
9			E	2.30				3.03			0.73			E	10	
11	20	23_BACK BAR CABINET FREEZER	E	0.60	2#12, #12G, 3/4"			0.81	2#12, #12G, 3/4"	0.21	E	138_DROP-IN ICE CREAM FREEZER	20	12		
13	20	104_AIR CURTAIN (ACH-3(N))	H	0.28	2#12, #12G, 3/4"	0.48			2#12, #12G, 3/4"	0.20	E	59_EXHUAUST HOOD LIGHT CIRCUIT	20	14		
15	60-3P	97_DISHWASHER	E	6.20	3#12, #12G, 3/4"	6.92	6.92		2#12, #12G, 3/4"	0.72	E	60_EXHUAUST FAN	20-2P	16		
17			E	6.20						0.72	E			18		
19			E	6.20						0.72	H			20		
21	20	68_FIRE SUPPRESSION	O	0.50	2#12, #12G, 3/4"		1.22		3#12, #12G, 3/4"	0.72	H	MAU-1 (N)	15-3P	22		
23	20-3P	KXF-2 (N)	M	0.79	3#12, #12G, 3/4"	0.79		1.51		0.72	H	SPARE	20-2P	24		
25			M	0.79											26	
27			M	0.79							0.79					28
29			M	0.79												30
31	20	64_EXHUAUST HOOD LIGHT CIRCUIT	E	0.20	2#12, #12G, 3/4"			2.30		2.10	R			32		
33	20	RECEPTACLE-CONVENIENCE, LV PROVISION	R	0.72	2#12, #12G, 3/4"	2.82			3#10, #10G, 3/4"	2.10	R	67_REMOTE EXHUAUST HOOD CONTROL PANEL	30-3P	34		
35	20	SPARE					2.10			2.10	R			36		
37	20	SPARE						0.72	2-12 + 1#12G, 3/4"	0.72	M	KXF-1 (N)	20-2P	38		
39	20	SPARE				0.72		0.00		0.72	M			40		
41	20	112-1_WALK-IN COOLER CONDENSING UNIT	E	0.09	2#12, #12G, 3/4"			0.09				SPARE	30-2P	42		
TOTAL CONNECTED LOAD (KVA)						15.23	15.21	13.55								

PANEL: EP (NEW)										MOUNTING: RECESSED						
208Y/120		VOLTS,		3		PHASE,		4		WIRE		PANEL LOCATION: STORAGE				
MAIN CB:		NA		MLO:		150A		BUS:		225A		MIN,		FED FROM: EXISTING ELECTRICAL SERV		
NOTE: L: LIGHTING, R: RECEPTACLES, E: KITCHEN/EQUIPMENT: HVAC, M: MOTOR, W: ELECTRIC WATER HEATER, C: REFRIGERATION, O: OTHER/MISC. (TYPICAL)																
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.		
						A	B	C								
1	20	69_WORKSTOP FREEZER 1-DOOR	E	0.22	2#12, #12G, 3/4" C	0.42			2#12, #12G, 3/4" C	0.20	E	59_EXHAUST HOOD LIGHT CIRCUIT	20	2		
3		SHUNT TRIP			2#12, #12G, 3/4" C		0.00					SHUNT TRIP		4		
5	20	111_WALK-IN BEER COOLER	E	1.00	2#12, #12G, 3/4" C			1.72	2#12, #12G, 3/4" C	0.72	R	60_EXHAUST FAN	20-2P	6		
7	20	112_WALK-IN BEER EVAPORATE UNIT	E	1.00	2#12, #12G, 3/4" C	1.72				0.72	E			8		
9	20	80_REFRIGERATED BASE UNIT	E	0.37	2#12, #12G, 3/4" C		0.37					SHUNT TRIP		10		
11		SHUNT TRIP						7.20		7.20	E			12		
13	20	64_EXHAUST HOOD LIGHT CIRCUIT	E	0.20	2#12, #12G, 3/4" C	7.40			3-4 + 1#8G, 1" C.	7.20	E	83_GRIDDLE ELECTRIC COUNTERTOP	80-3P	14		
15		SHUNT TRIP					7.20			7.20	E			16		
17	20-2P	SPARE						0.00				SHUNT TRIP		18		
19						1.00			2#12, #12G, 3/4" C	1.00	E	84_DOUBLE DECK CONVECTION OVEN	20	20		
21	20	OFFICE QUAD RECEPTACLE	R	0.72	2#12, #12G, 3/4" C		0.72					SHUNT TRIP		22		
23	20	CONV RECEPTACLE	R	0.54	2#12, #12G, 3/4" C			1.54	2#12, #12G, 3/4" C	1.00	E	84_DOUBLE DECK CONVECTION OVEN	20	24		
25		SHUNT TRIP				1.80			2#12, #12G, 3/4" C	1.80	R	SHOW WINDOW RECEPTACLE	20	26		
27	20	AIR CURTAIN (ACH-4(N))	M	0.30	2#12, #12G, 3/4" C		0.48		2#12, #12G, 3/4" C	0.18	R	TV DISPLAY UNIT	20	28		
29	20	AIR CURTAIN (ACH-2(N))	M	0.30	2#12, #12G, 3/4" C			0.48	2#12, #12G, 3/4" C	0.18	R	TV DISPLAY UNIT	20	30		
31	20	AIR CURTAIN (ACH-1(N))	M	0.28	2#12, #12G, 3/4" C	2.08			2#12, #12G, 3/4" C	1.80	L	SIGNAGE	20	32		
33	20	OFFICE QUAD RECEPTACLE	R	0.72	2#12, #12G, 3/4" C		2.28		2#12, #12G, 3/4" C	1.56	E	121_30 DEG. SEAFOOD WALK-IN COOLER	20-2P	34		
35	20	FSD	M	0.20	2#12, #12G, 3/4" C			1.76		1.56	E			36		
37	20	MD	M	0.20	2#12, #12G, 3/4" C	0.38			2#12, #12G, 3/4" C	0.18	R	TV DISPLAY UNIT	20	38		
39	20	122_30 SEAFOOD WALK-IN COOLER EVAPORATER	E	1.00	2#12, #12G, 3/4" C		1.72		2#12, #12G, 3/4" C	0.72	R	WP/ GFI RECEPTACLE	20	40		
41	20	122.1_30 SEAFOOD WALK-IN COOLER CONDENSER	E	0.09	2#12, #12G, 3/4" C			0.45	2#12, #12G, 3/4" C	0.36	R	WP/ GFI RECEPTACLE	20	42		
TOTAL CONNECTED LOAD (KVA)						14.80	12.77	13.15								

PANEL SCHEDULE KEY NOTES:



NOT USED.

E.C SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION OF FIRE SMOKE DAMPER AND PROVIDE CIRCUIT AS SHOWN.

E.C SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION OF MOTORIZED DAMPER AND PROVIDE CIRCUIT AS SHOWN.

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED



**SCOPE OF WORK**

PROVIDE ALL PLUMBING FOR A NEW RESTAURANT WITHIN AN EXISTING BUILDING SHELL INCLUDING ALL WATER, SANITARY, GREASE SANITARY & VENT LINES AND CONNECT TO EXISTING UTILITIES.

COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES.

PROVIDE ALL PLUMBING FOR A NEW RESTAURANT WITHIN AN EXISTING BUILDING SHELL INCLUDING ALL WATER, SANITARY, GREASE SANITARY & VENT LINES AND CONNECT TO EXISTING UTILITIES.

COORDINATE WITH GC AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES.

#### PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING OR PRECEDING WITH WORK.
3. ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
4. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
5. ALL MATERIALS SHALL BE NEW.
6. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
7. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
8. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
9. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
10. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
12. EXPOSED WATER PIPING SHALL BE TYPE "1" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANSIS/FS STANDARD 61.
13. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
14. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
15. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
16. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS, EXCEPT AT WATER HEATER AS PER CODE.
17. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
18. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND GAS PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
19. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE WITHIN 72 HOURS OF NOTIFICATION AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED. PROVIDE COPY TO LL.
20. STUDDOR MINIMAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.
21. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
22. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
23. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
24. WATER PIPING INSULATION SHALL BE 1" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING, WHERE DOMESTIC WATER TEMPERATURES ARE 120°F OR GREATER. ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVP PIPING WITH 1/2" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. SEE PLUMBING DRAWINGS FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40 FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40.
26. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
27. NO JOINTS UNDERGROUND FOR COPPER.
28. PLUMBING FIXTURES SHALL COMPLY WITH 2023 FBC-PLUMBING, 8TH EDITION. (ADOPTS IPC 2021)
29. WATER HAMMER ARRESTORS AS PER 2023 FBC-PLUMBING, 8TH EDITION. (ADOPTS IPC 2021)
30. PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
31. PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
32. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
33. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

## ENERGY CONSERVATION NOTES

1. AS PER 2023 FBC-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.

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	MINIMUM PIPE INSULATION THICKNESS						
	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU · IN / (H · FT <sup>2</sup> · °F)	MEAN RATING TEMPERATURE, °F	<1	1 TO <1½	1½ TO <4	4 TO <8	≥8
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

2. AS PER 2023 FBC-ENERGY CONSERVATION CODE SECTION C404.6.1, AUTOMATIC CONTROLS SHALL BE INSTALLED THAT LIMITS THE OPERATION OF A RECIRCULATING PUMP TO THE POINT OF RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE.
3. AS PER 2023 FBC-ENERGY CONSERVATION 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 FLOW FIXTURE OR FIXTURE WITHIN 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).

## PLUMBING LEGENDS

	SANITARY SEWER PIPING
	VENT PIPING
	GREASE SANITARY SEWER PIPING
	EXISTING GREASE SANITARY SEWER PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	EXISTING COLD WATER PIPING
	PIPE UP
	PIPE DROP
	GAS PIPING
	EXISTING GAS PIPING
	FLOOR CLEAN OUT
	P-TRAP
	CW
	HW
	HWR
	DCVA
	GAS SHUT-OFF VALVE
	GATE VALVE
	CHECK VALVE
	BALANCING VALVE
	FD/HD
	I.W.
	FS
	POINT OF CONNECTION
	THERMOSTATIC MIXING VALVE

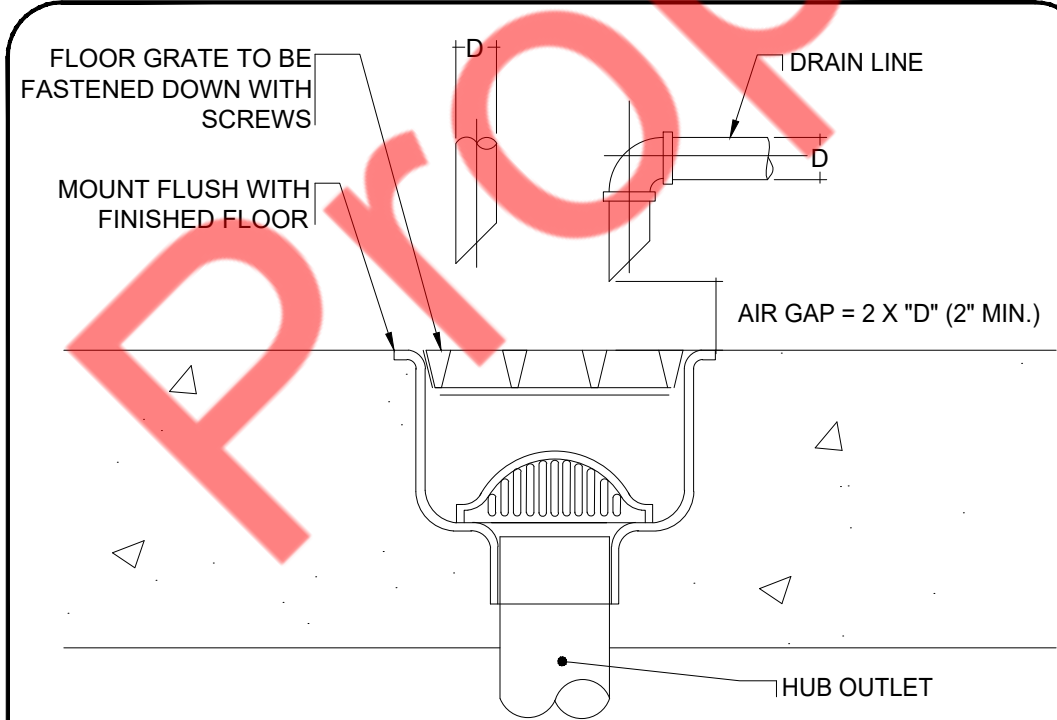
## FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (N)	3/4"	-	4"	2"
LAVATORY (N)	1/2"	1/2"	2"	1-1/2"
3 COMPARTMENT SINK	1/2"	1/2"	1.W.	-
HAND SINK	1/2"	1/2"	2"	1-1/2"
PREP SINK	1/2"	1/2"	1.W.	-
MOP SINK	1/2"	1/2"	3"	2"
FLOOR DRAIN / SINK	-	-	3"	2"

## EXISTING CONTIDITONS NOTES

### STOP AND READ

THE CONTRACTOR AND SUB-CONTRACTORS **SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED.** THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT NOT LIMITED TO: DIMENSIONS BOTH HORIZONTALLY AND VERTICAL, ELECTRICAL SERVICE /PANELS LOCATION AND VOLTS/PHASE, LOCATION/ QTY OF ROOF MOUNTED HVAC EQUIPMENT, CONFIRM THAT INTERIOR HVAC HUNG UNITS HAVE PROPER SUPPORT CONNECTIONS FOR EXISTING STRUCTURE, FIRE SPRINKLER MAIN RUNS, TOILET ROOM DIMENSIONS, DOOR SWING FOR DOORS TO REMAIN AND ETC. IF NOT VERIFIED AND DISCOVERED AT A LATER TIME, THE CONTRACTOR SHALL REIMBURSE THE ARCHITECT FOR THE REDESIGN FEE. THIS DOES NOT INCLUDE HIDDEN WORK I.E. PITCH OF SANITARY LINES, ACTUAL CONDITIONS OF EXISTING HVAC EQUIPMENT, STRUCTURAL COLUMNS/BEARING WALLS OR CONDITIONS OF GREASE INTERCEPTORS AND ETC.



### FLUSH TO FLOOR SINK DETAIL

\*NOTE- COORDINATE WITH ARCHITECT FOR PATCHING/TRENCHING THE SLAB.

RESTROOM FIXTURE SCHEDULE	WATER	WASTE	

Item No.	Qty.	Description	Manufacturer	Model	Hot	Cold	Waste	Usage	Spec
A	4	WATER CLOSET	AMERICAN STANDARD	215CA-104		3/4"	4"		
B	4	SINK	KOHLER	K-2035-1-0			2"		
B1	4	***SINK FAUCET	KOHLER	970660-4-BL	1/2"	1/2"		-	GPM
TMV	17	THERMAL MIXING VALVES	WATTS	LFMMV	1/2"	1/2"			

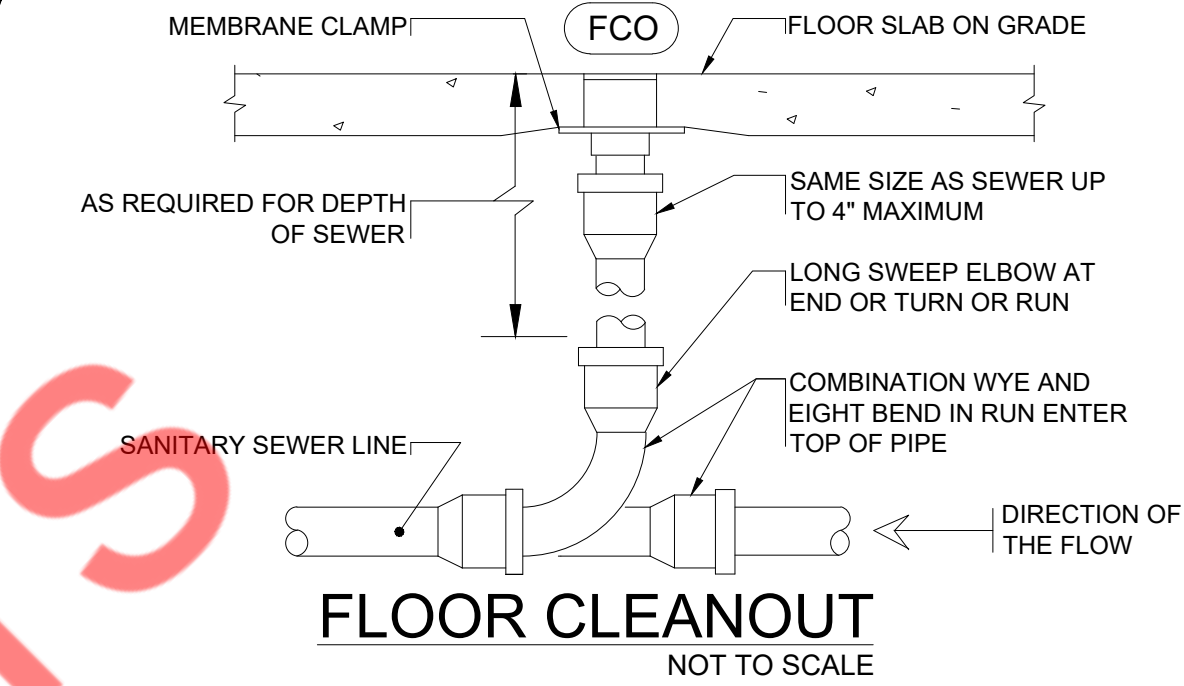
KITCHEN EQUIPMENT PLUMBING SCHEDULE	WATER	WASTE
-------------------------------------	-------	-------

Item No.	Qty.	Description	MANUFACTURER	MODEL	Hot	Cold	Direct	Indirect
1.5	1	32"W X 19"W X 14"D, 89 LBS ICE CAPACITY, 10-1/2"D INSIDE LINER	-	-	-	-	-	3/4"
1.7	1	10"W X 14"L X 10"D UNDER COUNTERTOP MOUNT UTILITY SINK W / FAUCET	-	-	1/2"	1/2"	-	1-1/2"
2	1	30"W X 19"D X 37"H UNDERBAR S/S ICE BIN W/ DOUBLE SPEED RAIL	-	-	-	-	-	3/4"
4	1	18"W X 19"D X 37"H UNDERBAR S/S DRAINBOARD W/DOUBLE SPEED RAIL	-	-	-	-	-	1/2"
6	1	12"W X 24"D X 37"H UNDERBAR S / S MIXOLOGY SINK UNIT	-	-	(2)1/2"	1/2"	-	1-1/2"
7	1	GLASS WASHER	ECOLAB	OMEGA 5E	-	1/2"	-	2
8	1	24"W X 24"D X 37"H UNDERBAR S / S GLASS RACK STORAGE RACK W/ DRAINBOARD TOP	-	-	-	-	-	1-1/2"
9	1	19.75"W X 17.75"D X 39.5"H TALL ICE MAKER WITH BIN (2" SQUARE CUBE ICE)	-	-	-	-	-	3/4"
15	1	12"W X 24"D X 37"H UNDERBAR S / S MIXOLOGY SINK UNIT	-	-	(2)1/2"	1/2"	-	1-1/2"
16	1	30"W X 24"D X 37"H UNDERBAR S / S CORNER DRAINBOARD	-	-	-	-	-	1-1/2"
18	1	36"W X 19"D X 37"H UNDERBAR S / S ICE BIN W / DOUBLE SPEED RAIL	-	-	-	-	-	3/4"
27	1	36"W X 19"D X 37"H UNDERBAR S / S ICE BIN W / DOUBLE SPEED RAIL	-	-	-	-	-	3/4"
28	1	30"W X 24"D X 37"H UNDERBAR S / S CORNER DRAINBOARD	-	-	-	-	-	1-1/2"
29	1	12"W X 24"D X 37"H UNDERBAR S / S MIXOLOGY SINK UNIT	-	-	(2)1/2"	1/2"	-	1-1/2"
36	1	126"W X 32"W X 42" TALL FREE-STANDING S/S OYSTER DISPLAY ICE BIN W/ PERF. FALSE BOTTOM, SHUCKING RAIL & TRASH CHUTE	-	-	1/2"	-	-	1/2"
38	1	HAND SINK , WALL- MOUNTED	-	-	1/2"	1/2"	1-1/2"	-
56	1	74"W X 31-1/2"D X 36"H 5-WELL HOT FOOD TABLE W/ SINGLE PANTRY FILL FAUCET	-	-	1/2"	-	-	1/2"
77	1	FLOOR TROUGH WITH GRATE, 12" X 30"	-	-	-	-	3"	-
86	1	87"W X 30"D X 36"H S / S WORK TABLE W / 20"W X 20"W X 14"D PREP SINK & FAUCET, 3/4" UNDERSHELF	-	-	1/2"	1/2"	-	2
89	1	87"W X 30"D X 36"H S / S WORK- TABLE W / 20"W X 20"W X 14"D PREP SINK & FAUCET, 3/4" UNDERSHELF	-	-	1/2"	1/2"	-	2
94	1	HAND SINK , WALL- MOUNTED	-	-	1/2"	1/2"	1-1/2"	-
96	1	66"W X 30"D X 54"W X 30"D X 34"H S / S "L"-SHAPED SOILED DISHTABLE W/ 20"W X 20"W X 8"D PRE-RINSE SINK, PRE-RINSE SPRAY FAUCET & PRE-RINSE SINK BASKET	-	-	1/2"	1/2"	-	2
97	1	DISHWASHER	ECOLAB	XL-HT-VV	1/2"	1/2"	-	1-1/2"
99	1	132"W X 30"D X 34"H S / S CLEAN DISHTABLE W / 3-COMPARTMENT SINK, PRE-RINSE SPRAY & FAUCET	-	-	1/2"	1/2"	-	3 @ 2"
105	1	HAND SINK, WALL- MOUNTED	-	-	1/2"	1/2"	1-1/2"	-
107	1	HAND SINK, WALL- MOUNTED	-	-	1/2"	1/2"	1-1/2"	-
108	1	48"W ICE BIN	-	-	-	-	-	3/4"
109	1	48"W ICE MACHINE W / WATER FILTER	-	-	1/2"	-	-	(2) 1/2"
112	1	WALK-IN BEER COOLER EVAPORATOR COIL UNIT	-	-	-	-	-	3/4"
113	1	WALK-IN COOLER EVAPORATOR COIL UNIT	-	-	-	-	-	3/4"
119	1	BAG-N-BOX, SODA DISPENSING SYSTEM	-	-	1/2"	-	-	-
122	1	30" SEAFOOD WALK-IN COOLER EVAPORATOR COIL UNIT	-	-	-	-	-	3/4"
125	1	30"W ICE BIN	-	-	-	-	-	3/4"
126	1	30"W PELLET ICE MACHINE W / WATER FILTER	-	-	1/2	-	-	1/2"
130	1	DUAL COFFEE / TEA BREWER	-	-	1/2"	-	-	-
131	1	12"LX 7"D X 1"D DROP-IN RINSER FAUCET W/D RIP TROUGH & DRAIN	-	-	-	1/2"	-	1-1/2"
134	1	66"W X 30"D X 36"H S / S WORK TABLE W / 10"W X 14"W X 10"D S / S HAND SINK, FAUCET, 6"H 3-SIDED VERTICAL SPLASH GUARD, OPEN BASE	-	-	1/2"	1/2"	-	1-1/2"
135	1	26"W X 19"W X 14"D, 71 LBS ICE CAPACITY, 10-1/2"D INSIDE LINER	-	-	-	-	-	3/4"
136	1	MOP SINK W / SERVICE FAUCET	-	-	1/2"	1/2"	3"	-
139	1	DIPPER WELL AND FAUCET, WALL MOUNTED	-	-	-	1/2"	-	1-1/2"
FS	14	FLOOR SINK	REGENCY	600FSG1212SS	-	-	3"	-
FD	6	FLOOR DRAIN	ZURN	ZS415 W/ TYPE BS STRAINER	-	-	3"	-
HD	2	HUB DRAIN	-	-	-	-	3"	-

\*PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS. +HOT WATER 140°F. \*\*\*MIXING VALVE REQUIRED.  
THE KITCHEN EQUIPMENT SCHEDULE NEED TO VERIFY WITH CONTRACTOR/OWNER.

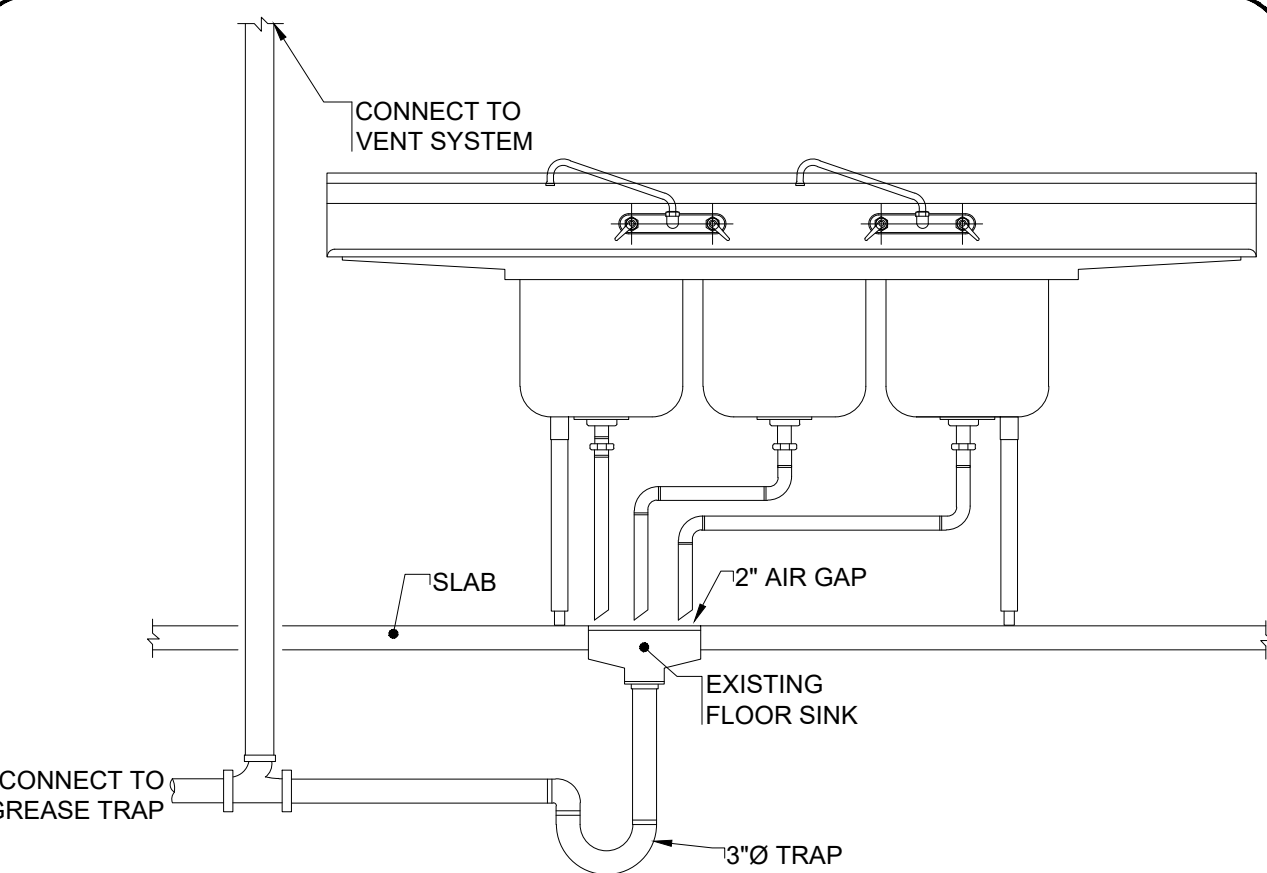
### GREASE INTERCEPTOR SCHEDULE

DESCRIPTION	SERVICE	LOCATION	CAPACITY	TYPE
GREASE INTERCEPTOR G1-1 (E)	KITCHEN WASTE	OUTSIDE	1250 GALLONS	IN-GROUND CEMENT
NOTE-CONTRACTOR TO PROVIDE ALL REQUIRED ACCESSORIES FOR SATISFACTORY WORKING OF GREASE TRAP AS PER SITE CONDITION				

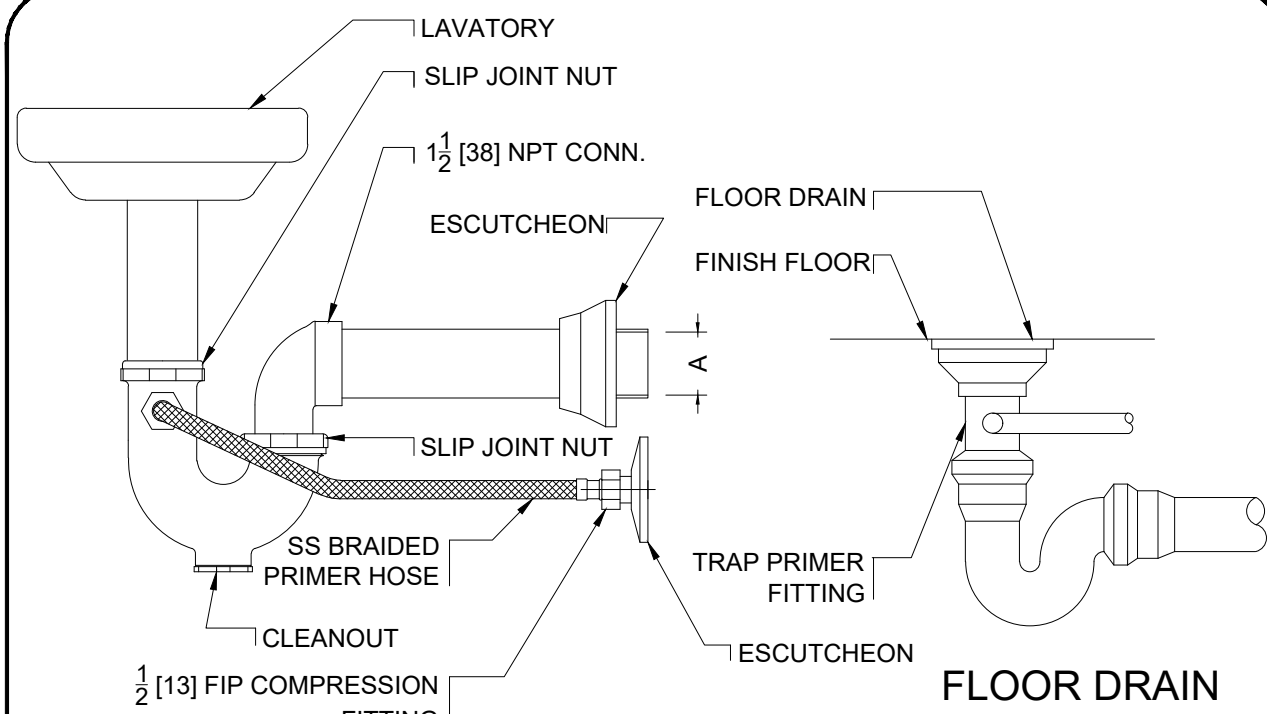


#### FLOOR CLEANOUT DETAIL NOTES

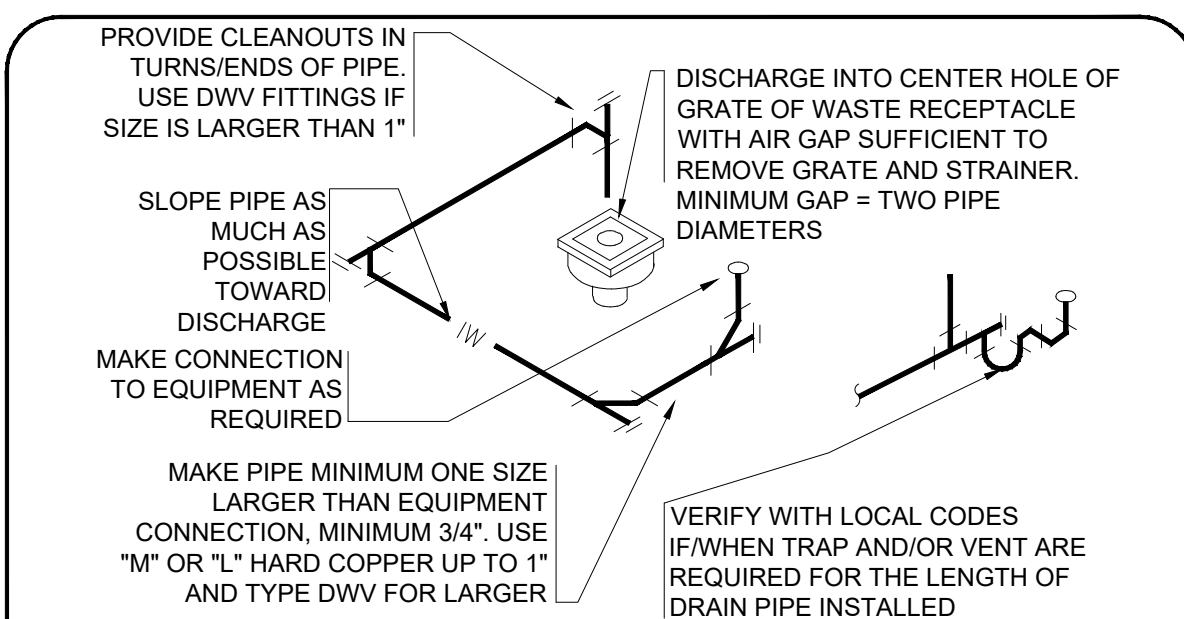
- 1) LOCATE CLEANOUT AT THIS LOCATIONS:
- A) BUILDING EXIT
  - B) AT TURNS OF PIPES GREATER THAN 45 DEGREES
  - C) AT 90' INTERVALS ON STRAIGHT RUNS
  - D) WHERE IS SHOWN ON PLANS
  - E) WHERE IS 18" CLEAR AROUND



## RECESSED FLUSH IN FLOOR WITH FLOOR SINK



### TRAP RESEAL DETAIL



ROUTE PIPE INCONSPICUOUSLY AND UNOBTUSIVELY. HANG PIPE AS REQUIRED. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

## INDIRECT WASTE CONNECTION DETAIL

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT

# ZUNZIBAR

## REVISIONS DATES:

07/10/2025	PROJECT CORE
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORE
11/13/2025	PROJECT CORE
11/20/2025	PROJECT CORE

11/20/2025

MICHAEL TOBIAS #76496  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25

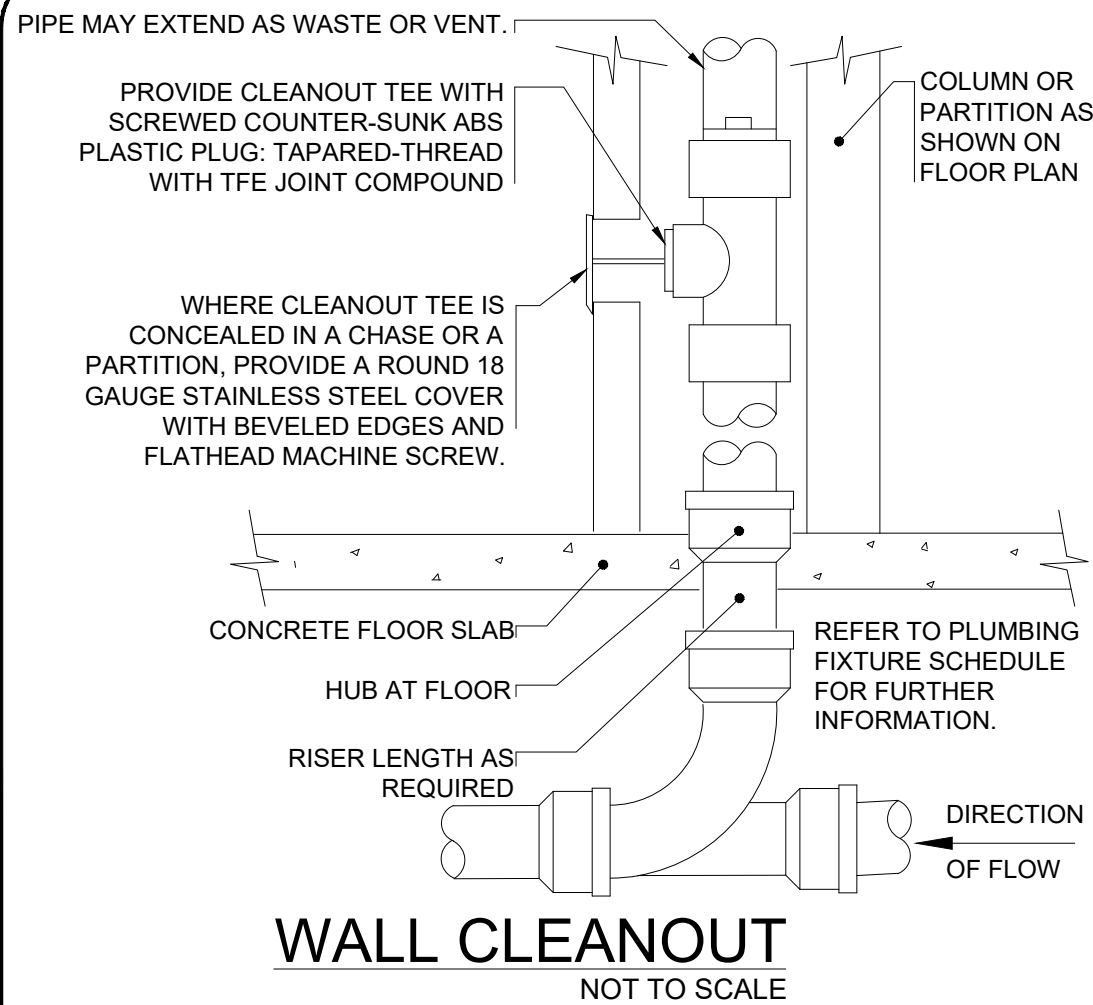
PROJECT #: 299F.1284F

DRAWN BY: NYE

CHECKED BY: NYE

## GENERAL NOTES, SCHEDULES & DETAILS

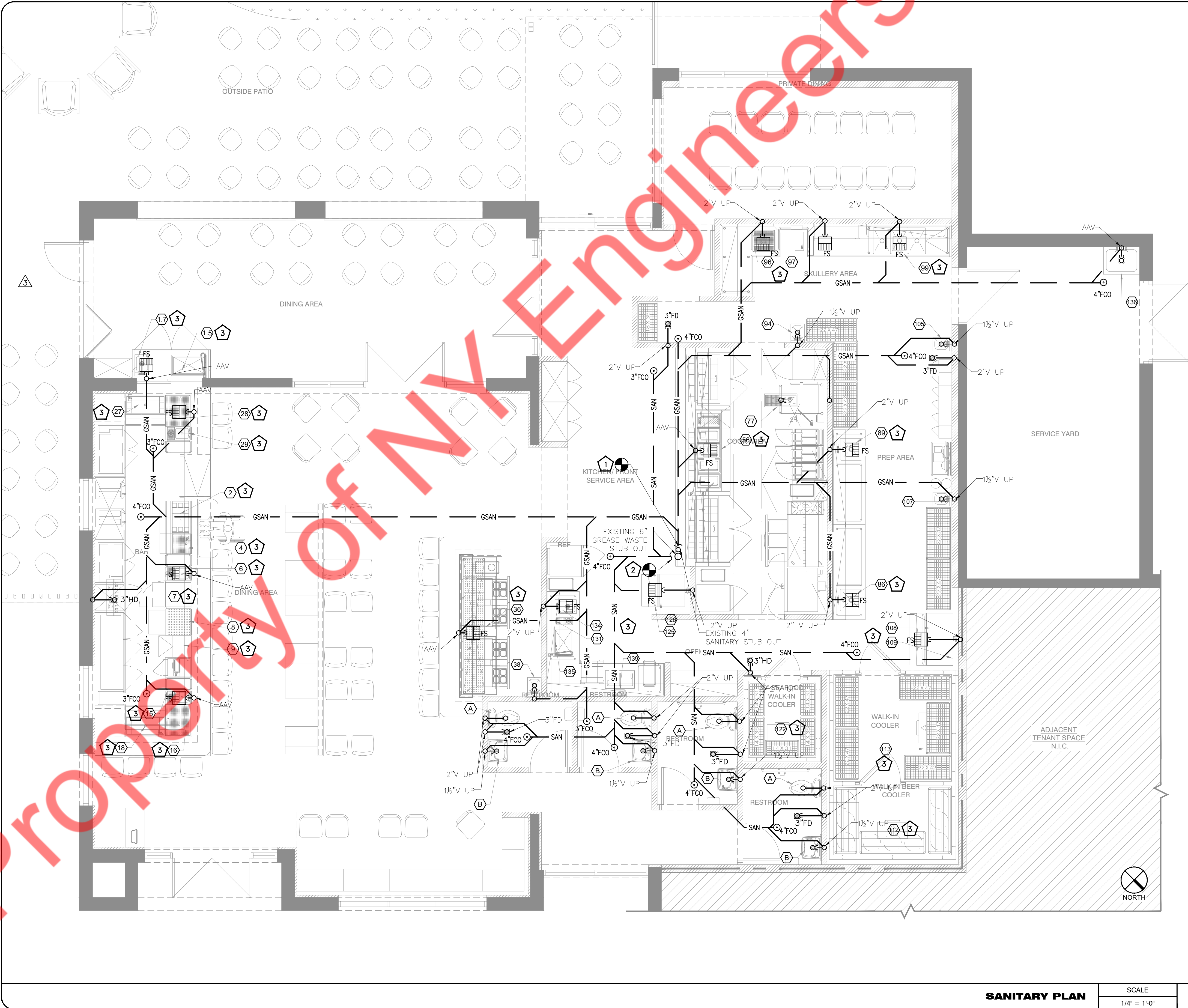




- WALL CLEANOUT DETAIL NOTES**
- 1) PROVIDE WCO WHERE SHOWN ON PLANE, AND ON SANITARY WASTE BRANCHES NOT SERVED WITH A FLOOR CLEANOUT.
  - 2) LOCATE ABOVE FIXTURE FLOOR RIM WITHIN 4' OF FLOOR.
  - 3) CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.
  - 4) LONG SWEEP AT END OF LINE OR COMBINATION WYE AND EIGHT BEND IN RUN OF LINE.
  - 5) CLEAN OUT FACE SHALL BE WITHIN 4" OF WALL SURFACE. PROVIDE A PIPE EXTENSION IF REQUIRED.

- GENERAL NOTES**
1. UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/16" PER FOOT OF RUN FOR PIPE 8" AND OVER, 1/8" PER FOOT FOR PIPE 3" TO 6" AND 1/4" PER FOOT FOR PIPE 2-1/2" AND SMALLER.
  2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
  3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
  4. ALL CLEANOUTS TO BE ACCESSIBLE.
  5. CONTRACTOR TO FIELD VERIFY THE EXISTING SANITARY, GREASE SANITARY AND VENT LOCATION AND ROUTING. MAKE NECESSARY CHANGES TO NEW PIPING AS PER THE EXISTING SITE CONDITION.
  6. AS PER FLORIDA PLUMBING CODE, ALL VENTS SHALL RISE VERTICALLY (AT LEAST 45 DEGREES) TO A POINT AT LEAST 6" ABOVE THE FIXTURE FLOOD LEVEL RIM OF THE HIGHEST FIXTURE BEFORE OFF SETTING HORIZONTALLY.
  7. CONTRACTOR CAN REUSE EXISTING GREASE WASTE, SANITARY AND VENT PIPING IF THE SIZING & SPECIFICATION OF EXISTING PIPING ARE AS PER OUR DRAWING. ALSO MAKE SURE THAT THE EXISTING PIPING SHOULD BE IN GOOD CONDITION.

- SANITARY PLAN & RISER KEY NOTES**
1. CONNECT NEW 4" GREASE SANITARY LINE TO EXISTING 6" GREASE SANITARY MAIN LINE IN SPACE. CONTRACTOR TO FIELD VERIFY THE SIZE, LOCATION & INVERT OF EXISTING SANITARY LINE AND UPGRADE IF REQUIRED.
  2. CONNECT NEW 4" SANITARY LINE TO EXISTING 4" SANITARY MAIN LINE IN SPACE. CONTRACTOR TO FIELD VERIFY THE SIZE, LOCATION & INVERT OF EXISTING SANITARY LINE AND UPGRADE IF REQUIRED.
  3. ROUTE INDIRECT WASTE TO THE NEAREST FLOOR SINK/HUB DRAIN.



**SANITARY PLAN**

SCALE  
1/4" = 1'-0"

**1**

**NY ENGINEERS**

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS  
AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN  
CONSENT OF NY ENGINEERS.

PROJECT

**ZUNZIBAR**

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #76496  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

**PLUMBING  
DETAILS &  
SANITARY PLAN**

P-2



GENERAL NOTES

- CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2023 FBC-ENERGY CONSERVATION CODE (ADOPTS IECC 2021) NOTES (REFER SHEET P-1)
- PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
- PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.

WATER KEY NOTES

- CONNECT NEW 1-1/4" CW LINE TO EXISTING 2" MAIN COLD WATER LINE. CONTRACTOR TO FIELD VERIFY THE SIZE AND LOCATION OF EXISTING COLD WATER LINE AND UPGRADE IF REQUIRED.
- PROVIDE ALL HAND SINKS AND LAVATORY WITH THERMOSTATIC MIXING VALVE. LIMIT HOT WATER TEMPERATURE TO 110°F SHALL COMPLY WITH ASSE 1017 AS PER FLORIDA PLUMBING CODE 2023.
- NEW WATER HEATER AS SHOWN IN PLAN WITH ALL REQUIRED ACCESSORIES. REFER TO WATER HEATER SCHEDULE FOR MORE DETAILS.
- CONNECT NEW CW PIPING TO EXISTING WALL HYDRANT CW PIPING. CONTRACTOR TO V.I.F THE LOCATION OF EXISTING WALL HYDRANT & CHECK THE FEASIBILITY OF CONNECTION.

NEW STORAGE WATER HEATER SCHEDULE

MANUFACTURER	RHEEM
MODEL	GHE-100-SS
EQUIPMENT TAG	HWHT-1
STATUS	NEW
FUEL	GAS
CAPACITY	100 GALLONS
QUANTITY	1
MBTU	160
RECOVERY	269 GPH*
VENT	3"
WEIGHT*	-

NOTES:

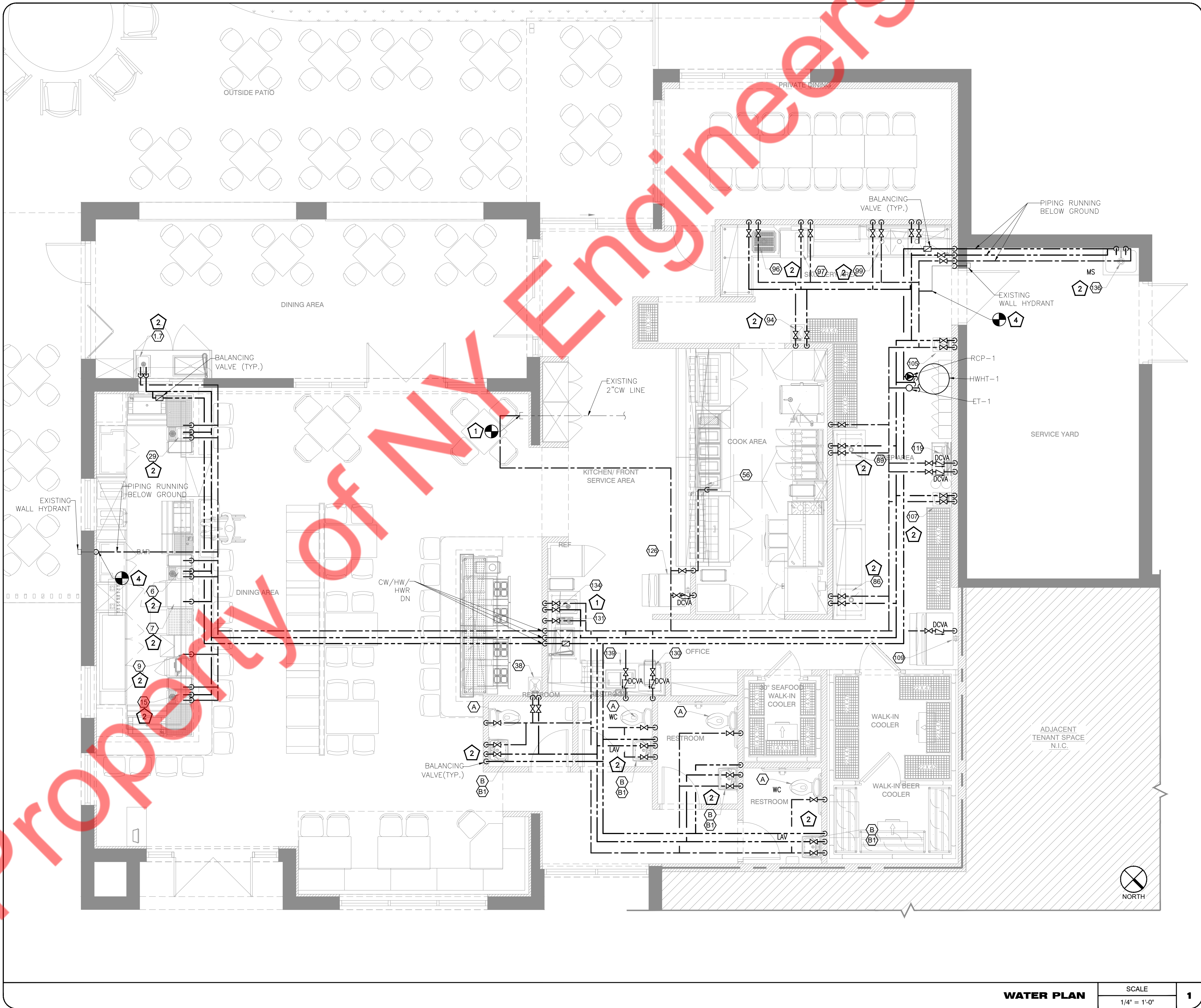
- \*OPERATION @ 70°F TEMPERATURE RISE.
- INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-12C-DD, 6.4 GAL VOLUME PER LOCAL CODE REQUIREMENTS, IF NOT EXISTING.

RECIRCULATION PUMP SCHEDULE

MANUFACTURER & MODEL	GRUNDFOS UP-15-18 B5
EQUIPMENT TAG	RCP-1
STATUS	NEW
GPM	2
WATER TEMP.(°F)	140
PUMP TYPE	INLINE
MHP	85 WATTS
V/PH/Hz	115/1/60
RPM	2280
SERVICE FACTOR	1.0

NOTE:

PROVIDE AQUA STAT WITH AUTOMATIC TIMER KIT FOR THE TEMPERATURE CONTROL OF HOT WATER SYSTEM. COORDINATE ELECTRICAL REQUIREMENTS FOR TIMER WITH ELECTRICAL CONTRACTOR.



WATER PLAN

SCALE  
1/4" = 1'-0"

1

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

PLUMBING  
DETAILS &  
WATER PLAN

P-3



1

PROVIDE NEW GAS METER. CONTRACTOR TO FIELD VERIFY CONDITION, SIZE, PRESSURE AND LOCATION OF EXISTING GAS PIPING WITH LANDLORD/UTILITY COMPANY AND REPLACE IF REQUIRED. GAS METER CAPACITY SHOULD BE MINIMUM OF 1002 MBH.

2

CONTRACTOR TO FIELD VERIFY EXISTING AVAILABLE PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED FOR ALL MECHANICAL EQUIPMENTS, KITCHEN EQUIPMENT AND GAS FIRED WATER HEATER. PROVIDE PRESSURE REGULATOR IF REQUIRED.

3

THE CONTRACTOR IS REQUIRED TO FIELD VERIFY AND CONFIRM THAT THE GAS LINE ENTERING THE BUILDING IS POSITIONED NO HIGHER THAN 4 FEET ABOVE FINISHED FLOOR (AFF). ADDITIONALLY, ALL EXTERIOR PIPING MUST BE PAINTED TO MATCH THE BUILDING'S EXTERIOR.

NY ENGINEERS

THIS DOCUMENT IS THE PROPERTY OF NY ENGINEERS AND SHALL NOT BE REPRODUCED WITHOUT THE WRITTEN CONSENT OF NY ENGINEERS.

PROJECT

ZUNZIBAR

REVISIONS DATES:

07/10/2025

PROJECT CORD.

07/16/2025

BD COMMENTS

08/20/2025

BD COMMENTS

08/21/2025

PROJECT CORD.

11/13/2025

PROJECT CORD.

11/20/2025

PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25

PROJECT #: 299F.1284F

DRAWN BY: NYE

CHECKED BY: NYE

PLUMBING GAS PLAN

P-4



REVISIONS DATES:	
07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TORIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

PLUMBING  
DETAILS  
& WATER RISER

P-5

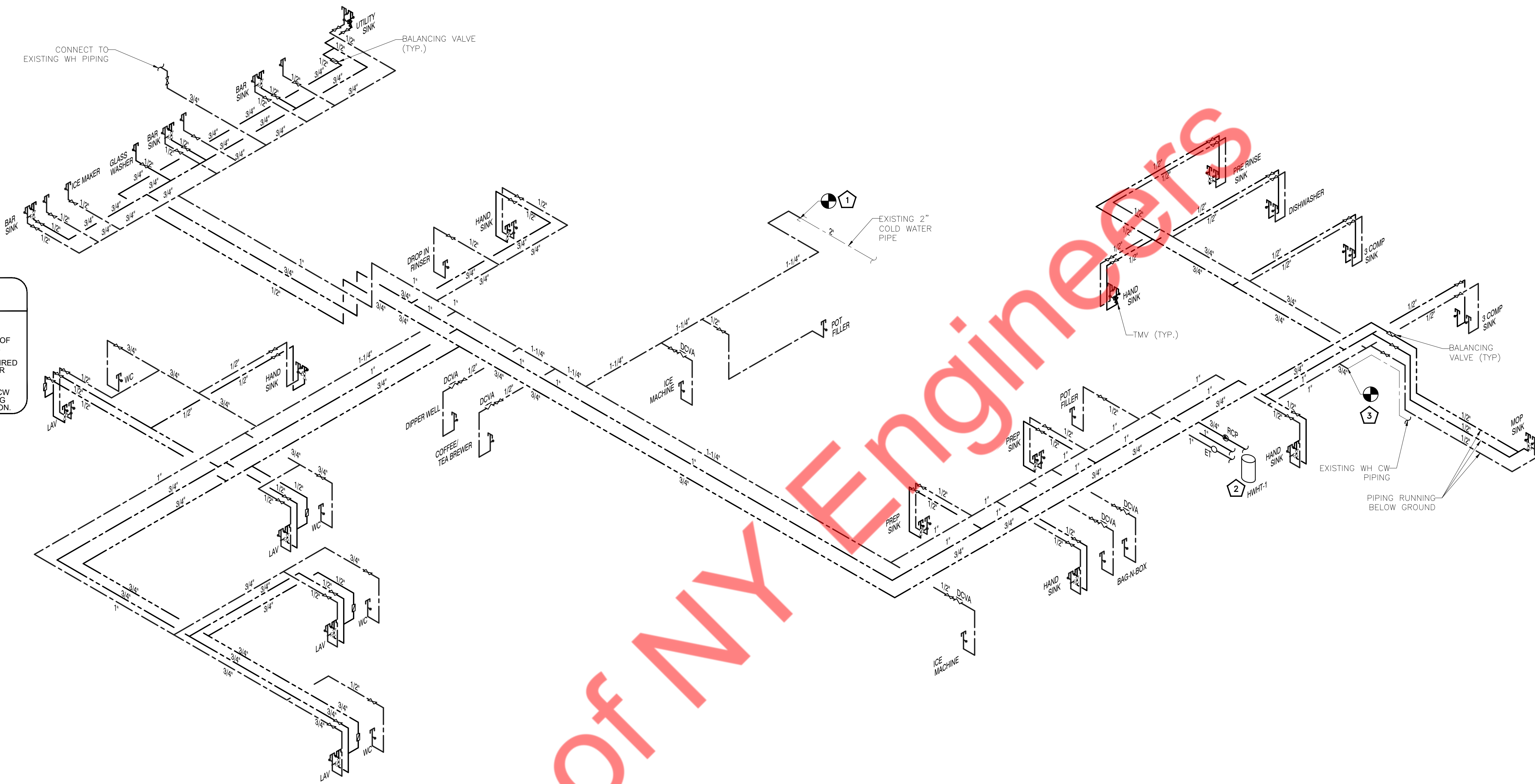
FIXTURE FACTOR VALUE *	
4 WATER CLOSET (N) @ 5	= 20
4 LAVATORY (N) @ 2	= 8
1 MOP SINK (N) @ 3	= 3
1 3-COMP SINK @ 4	= 4
1 DISHWASHER @ 1.4	= 1.4
1 PRERINSE SINK @ 1.4	= 1.4
5 HAND SINK @ 0.7	= 3.5
2 PREP SINK @ 1.4	= 2.8
3 UNDERBAR HAND SINK @ 0.7	= 2.1
1 GLASS WASHER @ 0.7	= 0.7
1 UNDERBAR UTILITY SINK @ 1.4	= 1.4
9 MISC. ** @ 0.25	= 2.25
TOTAL	= 50.55

\* TABLE E103.3(2) - FLORIDA PLUMBING CODE, 2023  
(8TH EDITION)

\*\* ICE MAKER, BAG-N-BOX, POT FILLER  
FAUCET, COFFEE / TEA BREWER, SODA  
DISPENSER, DIPPER WELL, DROP IN RINSER  
1 1/4" WATER LINE REQUIRED

#### WATER RISER KEY NOTES

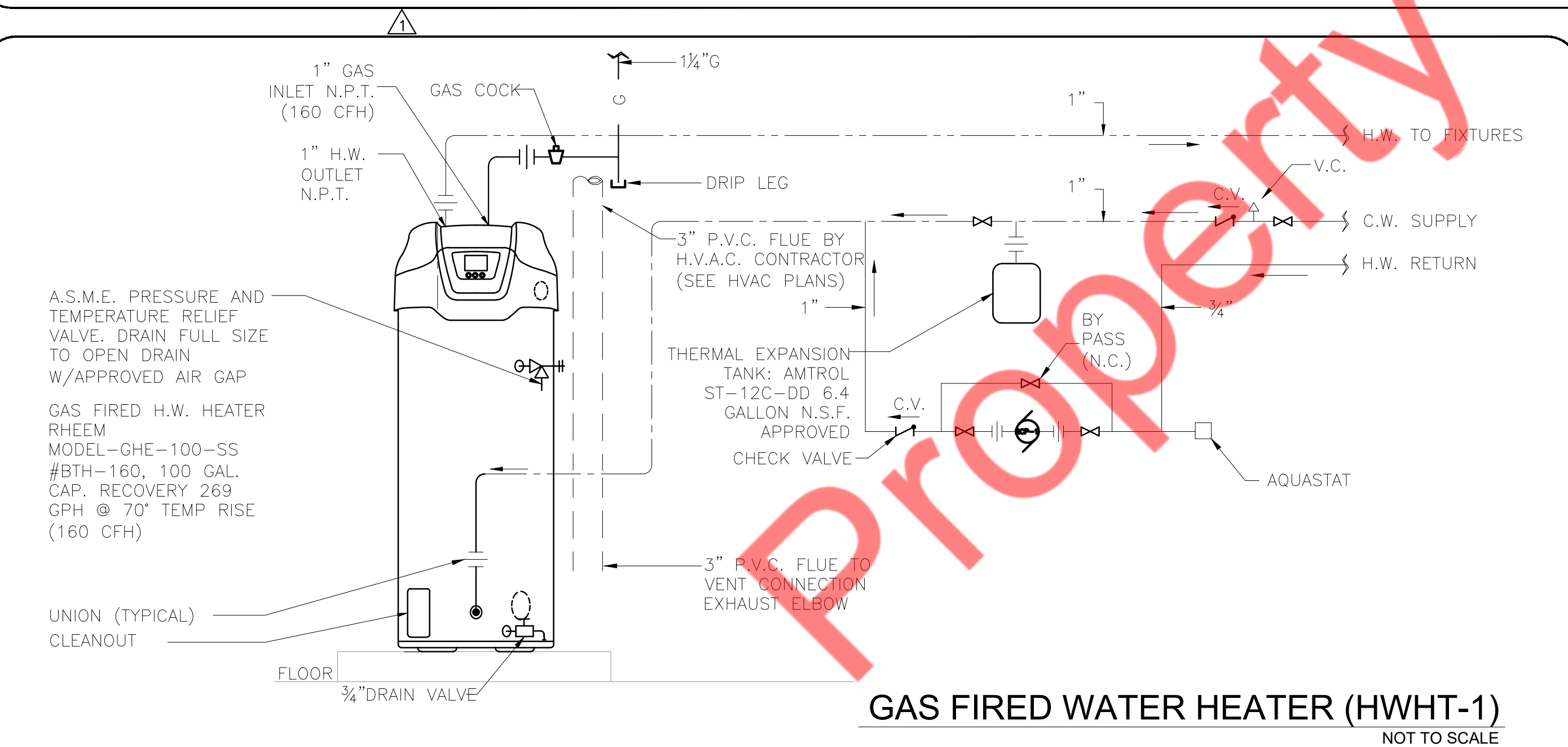
- CONNECT NEW 1-1/4" CW LINE TO EXISTING 2" MAIN COLD WATER LINE WITH NEW WATER METER AND BFP. CONTRACTOR TO FIELD VERIFY THE SIZE AND LOCATION OF EXISTING COLD WATER LINE AND UPGRADE IF REQUIRED.
- NEW WATER HEATER AS SHOWN IN PLAN WITH ALL REQUIRED ACCESSORIES. REFER TO WATER HEATER SCHEDULE FOR MORE DETAILS.
- CONNECT NEW CW PIPING TO EXISTING WALL HYDRANT CW PIPING. CONTRACTOR TO V.I.F THE LOCATION OF EXISTING WALL HYDRANT & CHECK THE FEASIBILITY OF CONNECTION.



WATER RISER

SCALE  
N.T.S.

1





REVISIONS DATES:	
07/10/2025	PROJECT CORD.
07/16/2025	BD COMMENTS
08/20/2025	BD COMMENTS
08/21/2025	PROJECT CORD.
11/13/2025	PROJECT CORD.
11/20/2025	PROJECT CORD.

11/20/2025

MICHAEL TOBIAS #7696  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA

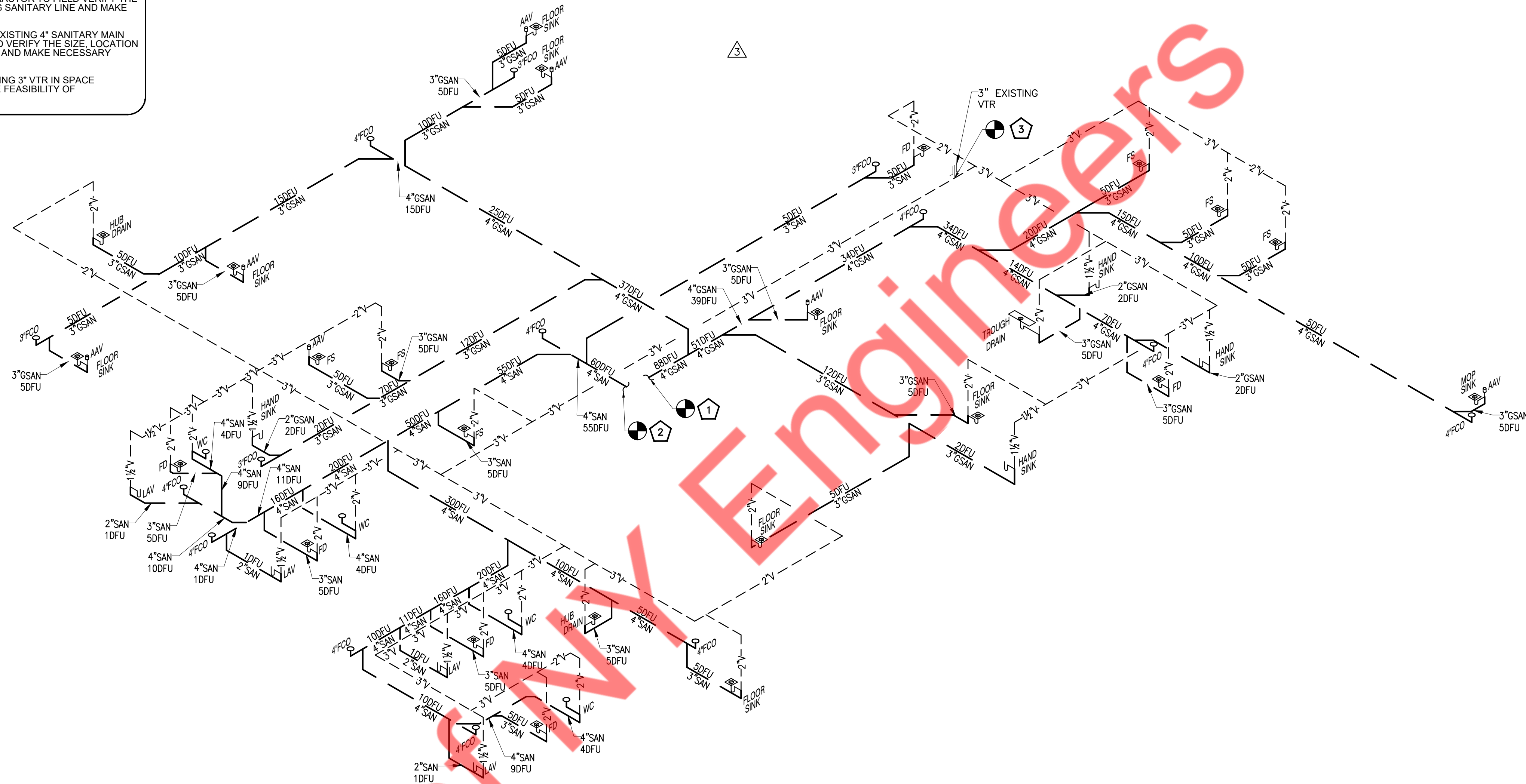
ISSUE DATE: 05.30.25  
PROJECT #: 299F.1284F  
DRAWN BY: NYE  
CHECKED BY: NYE

PLUMBING  
SANITARY & GAS  
RISER

P-6

### SANITARY RISER KEY NOTES

- CONNECT NEW 4" GREASE SANITARY LINE TO EXISTING 6" GREASE SANITARY MAIN LINE IN SPACE. CONTRACTOR TO FIELD VERIFY THE SIZE, LOCATION & INVERT OF EXISTING SANITARY LINE AND MAKE NECESSARY CHANGES IF REQUIRED.
- CONNECT NEW 4" SANITARY LINE TO EXISTING 4" SANITARY MAIN LINE IN SPACE. CONTRACTOR TO FIELD VERIFY THE SIZE, LOCATION & INVERT OF EXISTING SANITARY LINE AND MAKE NECESSARY CHANGES IF REQUIRED.
- CONNECT NEW 3" VENT LINE TO EXISTING 3" VTR IN SPACE. CONTRACTOR TO VERIFY IN FIELD THE FEASIBILITY OF CONNECTION UPGRADE IF REQUIRED.



SANITARY RISER

SCALE  
N.T.S.

2

TAG NO	QTY	DESCRIPTION	MANUFAC.	MODEL	SIZE	MBTUH.
HWHT-1	1	TANK WATER HEATER	RHEEM	GHE100SS-160	1"	160
73	3	FRYER	VULCAN	LG400	1"	120(3)
78	1	TILTING SKILLET	-	-	1"	125
79	1	HOT PLATE	VULCAN	VHP212	3/4"	60
81	1	CHEESEMELTER	-	-	3/4"	50
84	1	DOUBLE CONVECTION OVEN	VULCAN	VC44GD	3/4"	100
MUA-1(N)	1	MECHANICAL UNIT	REFER MECHANICAL SHEETS	REFER MECHANICAL SHEETS	1"	147
TOTAL LOAD IN MBH						1002

### GAS RISER KEY NOTES

- PROVIDE NEW GAS METER. CONTRACTOR TO FIELD VERIFY CONDITION, SIZE, PRESSURE AND LOCATION OF EXISTING GAS PIPING WITH LANDLORD/UTILITY COMPANY AND REPLACE IF REQUIRED. GAS METER CAPACITY SHOULD BE MINIMUM OF 1002 MBH.
- CONTRACTOR TO FIELD VERIFY EXISTING AVAILABLE PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED FOR ALL MECHANICAL EQUIPMENTS, KITCHEN EQUIPMENT AND GAS FIRED WATER HEATER. PROVIDE PRESSURE REGULATOR IF REQUIRED.
- GAS LINE RUNNING ABOVE ROOF. SHOWN HERE FOR REFERENCE ONLY.

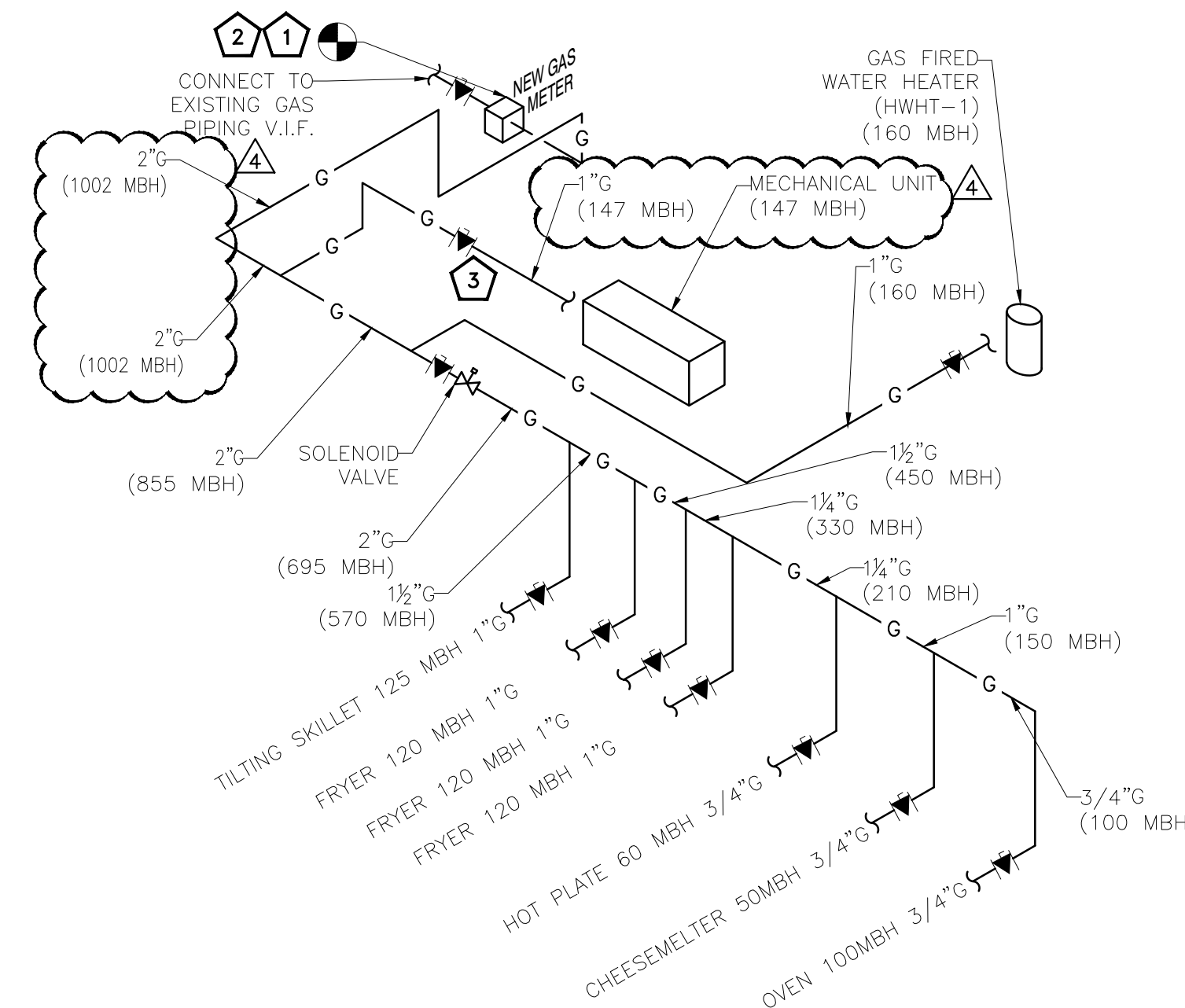
NATURAL GAS PIPING SYSTEM  
PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE GAS EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE ALL UNIONS, SHUT-OFF VALVES AND DIRT LEGS REQUIRED BY NFPA-54 AND GOVERNING LOCAL CODES AND AT EACH GAS APPLIANCE CONNECTION. PROVIDE ALL TESTS, METERS, INSPECTIONS, GAS PRESSURE REGULATORS, HANGERS AND EQUIPMENT CONNECTIONS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

- NOTES:
- GAS PIPING TO BE SCHEDULE 40 STEEL PIPE W/125 CAST IRON SREWED FITTINGS.
  - GAS SYSTEM TO BE INSTALLED BY QUALIFIED LICENSED CONTRACTOR.
  - VERIFY ALL EQUIPMENT BTU'S PRIOR TO INSTALLATION. ADJUST PIPE SIZE ACCORDING TABLE 402.4(2) 2023 FLORIDA FUEL GAS CODE.
  - CONTRACTOR CAN REUSE EXISTING GAS PIPING IF THE SIZING & SPECIFICATION OF EXISTING PIPING ARE AS PER OUR DRAWING. ALSO MAKE SURE THAT THE EXISTING PIPING SHOULD BE IN GOOD CONDITION.

GAS PIPE SIZING PER  
TABLE 402.4(2) 2023  
FLORIDA FUEL GAS CODE

EQUIVALENT LENGTH OF PIPE =  
= 90 FEET

INLET PRESSURE - LESS THAN 2.0 PSI  
PRESSURE DROP - 0.5" WC  
SPECIFIC GRAVITY - 0.60



GAS RISER

SCALE  
N.T.S.

1