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.

GENERAL NOTES

A. 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.

B. 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.

C. 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.

D. 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.

E. 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 MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F. 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.

G. 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.

H. G.C.TO 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 ARCHITECT'S OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.

I. 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. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY INSULATED.

J. G.C. SHALL COORDINATE WITH LANDLORD APPROVED ROOFING CONTRACTOR TO FLASH AND SEAL ALL ROOF PENETRATIONS TO MAINTAIN ROOFING WARRANTY.

K. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF ACCEPTANCE AND PROVIDE COPY TO LL.

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

MECHANICAL PLAN NOTES

A. REUSE EXISTING ONE 4.0 TON GAS HEAT ROOF TOP UNIT AND PROVIDE ONE NEW 1.0 TON AHU SPLIT AIR CONDITIONING SYSTEM. REUSE EXISTING SUPPLY DUCT WORK AS MUCH AS POSSIBLE. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES, RELOCATE AND REUSE EXISTING DIFFUSE AS SHOWN IN PLAN. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO AC UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.

B. 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 ROOF TOP 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.

C. 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.

D. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY INSULATED AND ALL INTERNAL CONCEALED DUCTWORK SHALL BE EXTERNALLY INSULATED.

E. 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 FINAL LOCATION OF THERMOSTAT. PROVIDE REMOTE SENSOR LOCATED 72" ABOVE FINISHED FLOOR NEAR LOCATION INDICATED SEAL WALL OPENING WITH CAULK. COORDINATE LOCATION ON SITE WITH GENERAL CONTRACTOR AND EQUIPMENT.

F. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION AND EXTERIOR DUCTS SHALL HAVE R-8 INSULATION AS PER 2012 KENTUCKY ENERGY CONSERVATION CODE(2012 IECC)

G. 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.

H. ALL EXISTING RTUS CONDENSATE DRAINS WILL BE PVC FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE APPROVED PLACE OF DISPOSAL.

I. ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.

J. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE AS PER 2012 INTERNATIONAL ENERGY CONSERVATION CODE, 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.

K. 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.

L. ALL HVAC CONTROLS AND CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

SCOPE OF WORK

REUSE EXISTING ONE 4.0 TON GAS HEAT ROOF TOP UNIT(CARRIER) AND PROVIDE ONE NEW 1.0 TON AHU SPLIT AIR CONDITIONING SYSTEM WITH SUPPLEMENTARY HEAT. REUSE EXISTING SUPPLY DUCTWORK AS MUCH AS POSSIBLE AND PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES, RELOCATE AND REUSE EXISTING DIFFUSER AS SHOWN IN PLAN.

1 PROVIDE TWO NEW BATHROOM EXHAUST FANS. PROVIDE ONE NEW KITCHEN EXHAUST FAN & ONE NEW EXHAUST FAN FOR MOP SINK.

COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT.

CITY OF INDEPENDENCE,KY BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2018 KBC/ 2015 IBC AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. 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.
2. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2015 KMC:
   A. VENTILATION SYSTEM SERVING COMMERCIAL COOKING APPLIANCES - 2015 KMC - 506
3. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. DUCT CONSTRUCTION AND INSTALLATION - 2015 KMC - 603
   B. STANDARDS OF HEATING - 2015 KMC - 309.1
   C. AIR INTAKES, EXHAUSTS AND RELIEF - 2015 KMC - 401.5
   D. AIR FILTERS - 2015 KMC - 605
   E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROL FOR AIR DISTRIBUTION SYSTEM - 2015 KMC - 606
   F. GAS FIRED EQUIPMENT - 2015 KENTUCKY FUEL GAS CODE
4. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
5. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2015 KMC 403.
6. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
7. 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.
8. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
9. SMOKE DETECTOR SHALL MEET UL268A.
10. STATEMENT SHALL BE FILLED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINIOUS OPERATION AT ALL TIME DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY THE 2015 KMC - 403.3
11. 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 - 2015 KENTUCKY MECHANICAL CODE SECTION 403.3.1.5. CONTRACTOR TO SUBMIT THE AIR - BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.

MECHANICAL SYMBOLS

EXHAUST FAN	EXHAUST FAN WITH LIGHT
SUPPLY OR OUTSIDE AIR DUCT	OPPOSED BLADE DAMPER
RETURN OR EXHAUST AIR DUCT	DUCT SMOKE DETECTOR
INSULATED RIGID DUCTWORK	PROGRAMMABLE THERMOSTAT
DUCT TRANSITION	HUMIDISTAT
MANUAL VOLUME DAMPER	REMOTE SENSOR
FLEXIBLE DUCTWORK R-6.0	TEMPERATURE SENSOR
	ROUND DUCT DIAMETER
	CUBIC FEET/ MINUTE
ROOF MOUNTED EXHAUST FAN OUTLET	SUPPLY AIR
	RETURN AIR
ROOFTOP UNIT	SUPPLY GRILLE
MOTORIZED DAMPER	CONDENSATE PIPING
FIRE DAMPER	BACK DRAFT DAMPER
	GENERAL CONTRACTOR
SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS	RETURN DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS

NOTE: THIS PROJECT MAY NOT USE EVERY SYMBOL OR DEVICE APPEARING ON THIS LEGEND.

OCCUPANCY CALCULATION PER 2015 KMC TABLE 403.3.1.1

DINING AREA	446 SQ. FT. @70 PEOPLE/1000SQ.FT.	32 PEOPLE
	TOTAL	32 PEOPLE

VENTILATION REQUIREMENTS PER 2015 KMC TABLE 403.3.1.1

DINING	446 SQ. FT. X 0.18 CFM/SQ. FT. =	81 CFM
	32 PEOPLE. X 7.5 CFM/PEOPLE. =	240 CFM
BACK OF HOUSE / DRY STORAGE	416 SQ. FT. X 0.12 CFM/SQ. FT. =	50 CFM
HALLWAY	169 SQ. FT. X 0.06 CFM/SQ. FT. =	11 CFM
OUTSIDE AIR REQUIRED		382 CFM
KITCHEN / SKULLERY	395 SQ. FT. X 0.7 CFM/SQ. FT. =	277 CFM
UNISEX ACC. RR	70 CFM PER FIXTURE	70 CFM
RESTROOM 2	70 CFM PER FIXTURE	70 CFM
MOP SINK	70 CFM	70 CFM
EXHAUST AIR REQUIRED		487 CFM
OUTSIDE AIR PROVIDED		500 CFM
EXHAUST PROVIDED		490 CFM
AIR BALANCE		
O/A PROVIDED RTU-1(E)		+400 CFM
O/A PROVIDED AHU-1(N)		+100 CFM
BEF-1(N) & BEF-2(N) @70 CFM EACH		-140 CFM
EF-1(N) @70 CFM		-70 CFM
EF-2(N) @280 CFM		-280 CFM
BUILDING PRESSURE		+10 CFM

FAN SCHEDULE

DESIGNATION	BEF-1(N)	BEF-2(N)	EF-1(N)	EF-2(N)
STATUS	NEW	NEW	NEW	NEW
QUANTITY	1	1	1	1
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL	SP-A110	SP-A110	SP-A110	SP-A510
CFM	70 CFM AT 0.3" W.G. ESP	70 CFM AT 0.3" W.G. ESP	70 CFM AT 0.3" W.G. ESP	280 CFM AT 0.5" W.G. ESP
FLA (AMPS)	0.19	0.19	0.19	3.3
ACCESSORIES	BDD, LITE KIT	BDD, LITE KIT	BDD, LITE KIT	BDD, LITE KIT
WEIGHT (LBS)	17	17	17	31
VOLT/PH/HZ	115/1/60	115/1/60	115/1/60	115/1/60
NOTES	1,2,3	1,2,3	1,2,4	1,2,5

NOTES :
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE BACK DRAFT DAMPER.
3. BEF-1(N) & BEF-2(N) INTERCONNECT WITH AHU-1(N).
4. EF-1(N) INTERCONNECT WITH RSCH LIGHT.
5. EF-2(N) INTERCONNECT WITH RTU-1(E).

GAS HEAT ROOF TOP UNIT SCHEDULE

UNIT TAG	RTU-1(E)
UNIT TYPE	GAS HEAT
MANUFACTURER	CARRIER
MODEL	48TCEA05A2A5A0B0A0 & V.I.F.
STATUS	EXISTING
LOCATION	ROOF
TOTAL CAPACITY	4.0 TONS
TOTAL COOLING MBH	S.A.E
TOTAL SENSIBLE COOLING MBH	S.A.E
EER/SEER	S.A.E
HEATING MBH (INPUT)	115.0 & V.I.F
HEATING MBH (OUT.)	90.5 & V.I.F
AFUE (%)	S.A.E
SUPPLY AIR (CFM)	1600
OUTDOOR AIR (CFM)	400 (1)
VOLTAGE/PHASE/HZ	208-230/3/60 & V.I.F
MCA (A)	24.0 & V.I.F
MOCP (A)	30.0 & V.I.F
ESP (IN. OF W.G.)	S.A.E
WEIGHT (lbs)	S.A.E

NOTES:
1. EXISTING RTU-1(E) WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
2. S.A.E- SAME AS EXISTING & V.I.F- VERIFY IN FIELD.
3. CONTRACTOR TO FIELD VERIFY IF EXISTING RTU-1(E) IS WORKING AT THEIR 100% RATED CAPACITIES/LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
5. IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING RTU-1(E). CO-ORDINATE FINAL LOCATION OF T-SENSOR WITH ARCHITECT/OWNER.
6. CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU-1(E) TO MATCH VALUES MENTIONED IN ABOVE TABLE.
7. REPLACE FILTERS, IF REQUIRED.

SPLIT SYSTEM SCHEDULE

AIR HANDLER DATA	UNIT TAG	AHU-1(N)
	UNIT TYPE	MULTI-POSITION
	AREA SERVED	SEE PLAN
	SUPPLY AIR (CFM)	400
	OUTSIDE AIR (CFM)	100 (1)
	STATIC PRESS. (E.S.P.)	0.5
	VOLTS/PH/HZ	208-230/1/60
	TOT. COOLING CAP. (MBH)	12.0
	COOLING SENS. CAP (MBH)	9.24
	MANUFACTURER	MITSUBISHI OR EQUIVALENT
	MODEL NO.	PVA-A12AA7 OR EQUIVALENT
	WEIGHT, LBS	113
	ELECTRICAL HEATING kW	3.0
	HEATER MODEL NO.	EH03-MPA-SB
	MAX. UNIT AMPS	16.5/18.6
	MAX. CKT. BRKR. AMPS	20/25
CONDENSING UNIT DATA	UNIT TAG	ACCU-1 (N)
	AIR HANDLER SERVED	AHU-1 (N)
	CAPACITY	1.0 TR
	REFRIGERANT	R410-A
	COMPRESSOR RLA/LRA	7.0/12.0
	OUTDOOR FAN FLA	0.50
	V/Ph/Hz	208-230/1/60
	M.C.A. / M.C.B. AMPS	11.0/28.0
	MANUFACTURER	MITSUBISHI OR EQUIVALENT
	MODEL# (CONDENSER)	PUY-A12NKA7 OR EQUIVALENT
	TOT. COOLING CAP. (MBH)	12.0
	COOLING SENS. CAP (MBH)	9.24
	EER/SEER	13.4/21.4
	WEIGHT, LBS	92

SPLIT SYSTEM NOTES

1. COORDINATE FINAL LOCATION OF INDOOR AND OUTDOOR UNIT WITH ARCHITECT/OWNER.
2. SUPPLY AIR BASED ON HIGH SPEED.
3. REFRIGERANT R410A SHALL BE PROVIDED.
4. PROVIDE LOW AMBIENT CONTROL.
5. ALL REFRIGERANT PIPING TO BE SIZED PER MANUFACTURERS RECOMMENDATION.
6. CONTRACTOR TO PROVIDE A LONG LINE SET FOR REFRIGERANT PIPING IN THE EVENT THAT TOTAL REFRIGERANT LENGTH EXCEEDS THE MANUFACTURER'S STANDARD RECOMMENDED LENGTH.
7. PROVIDE DRAIN PAN WITH WATER LEAK DETECTOR.
8. VERIFY ALL DATA WITH MANUFACTURER PRIOR TO ORDERING EQUIPMENT.
9. PROVIDE CONDENSATE DRAIN PUMP IF REQUIRED. ROUTE CONDENSATE DRAIN FROM AHU-1(N) TO THE NEAREST PLUMBING DRAIN POINT WITH APPROVED MANNER. COORDINATE WITH PLUMBING CONTRACTOR.
10. CONTRACTOR TO PROVIDE NECESSARY ACCESSORIES AND CONTROLS FOR THE PROPER OPERATION OF ELECTRIC HEATING KIT.
11. COORDINATE WITH E.C. FOR ELECTRICAL REQUIREMENT PRIOR TO BASE BID/CONSTRUCTION.

CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CONNECTIONS, WIRE SIZES, BREAKERS, DISCONNECT ETC. PRIOR TO ORDERING AND BID.

DIFFUSER SCHEDULE (1)

MANUFACTURER	EXISTING	TITUS	TITUS	TITUS	TITUS
DESIGNATION	E	A	B	R	R1
USE	SUPPLY/RETURN	SUPPLY	SUPPLY	RETURN	RETURN
MODEL	EXISTING	300FS	TDC-AA	56FL	56FL
MOUNTING	CEILING	DUCT	CEILING	SAT CEILING	WALL
LOCATION	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
FACE SIZE	EXISTING	16" X 6"	12" X 12"	24" X 24"	36" X 12"
NECK SIZE	-	-	REFER TABLE A	-	-
FRAME TYPE	LAYIN	FLANGED	LAY IN /FLANGED	LAY IN	FLANGED
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE
NOISE CRITERIA	<30	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

NOTES:
1. MOUNTING FRAME TYPE SHALL BE COORDINATED WITH CEILING/ WALL CONSTRUCTION.
2. COORDINATE FINAL FINISH/COLOR WITH ARCHITECT/OWNER.
3. CONTRACTOR TO FIELD VERIFY AND CONFIRM, EXISTING DIFFUSER ARE PROVIDED WITH VD, IF NOT PROVIDE AND INSTALL VD TO THE EXISTING DIFFUSER.

NECK SIZE TABLE - A

FLEX DUCT DIA	CFM RANGE
Ø6"	0-100
Ø8"	101-200
Ø10"	201-400
Ø12"	401-600

HVAC PIPING INSULATION NOTES

1. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A2.5-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.
2. EXPOSED: INDOOR DUCTS, PIPING OR EQUIPMENT LOCATED IN MECHANICAL EQUIPMENT ROOMS AND IN AREAS WHICH WILL BE VISIBLE WITHOUT REMOVING CEILINGS OR OPENING ACCESS PANELS.
3. CONCEALED: INDOOR DUCTS, PIPING OR EQUIPMENT WHICH IS NOT EXPOSED.
4. OUTDOOR: DUCTS, PIPING OR EQUIPMENT WHICH IS EXPOSED TO THE WEATHER.

MINIMUM REFRIGERANT PIPE INSULATION THICKNESS (IN.)

FLUID OPERATING TEMP. RANGE & USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (IN.)				
	CONDUCTIVITY BTU.IN./(H.FT².°F)	MEAN RATING TEMP., °F	<1	1 TO<1-1/2	1-1/2 TO <4	4 TO <8	≥8
40 — 60	0.21 — 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 — 0.26	75	0.5	1.0	1.0	1.0	1.5

NY ENGINEERS

PROJECT

BETTER BLEND

REVISIONS DATES:
1 PROJECT COORD. 09.20.23

ISSUE DATE: 07.06.23
PROJECT #: 390C.1376C
DRAWN BY: NYE
CHECKED BY: NYE

MECHANICAL NOTES & SCHEDULES

M-1

THERMOSTATIC CONTROL

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, AT LEAST 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 OR GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED:

1. THE PERIMETER SYSTEM INCLUDES AT LEAST 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); AND
2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY A THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.

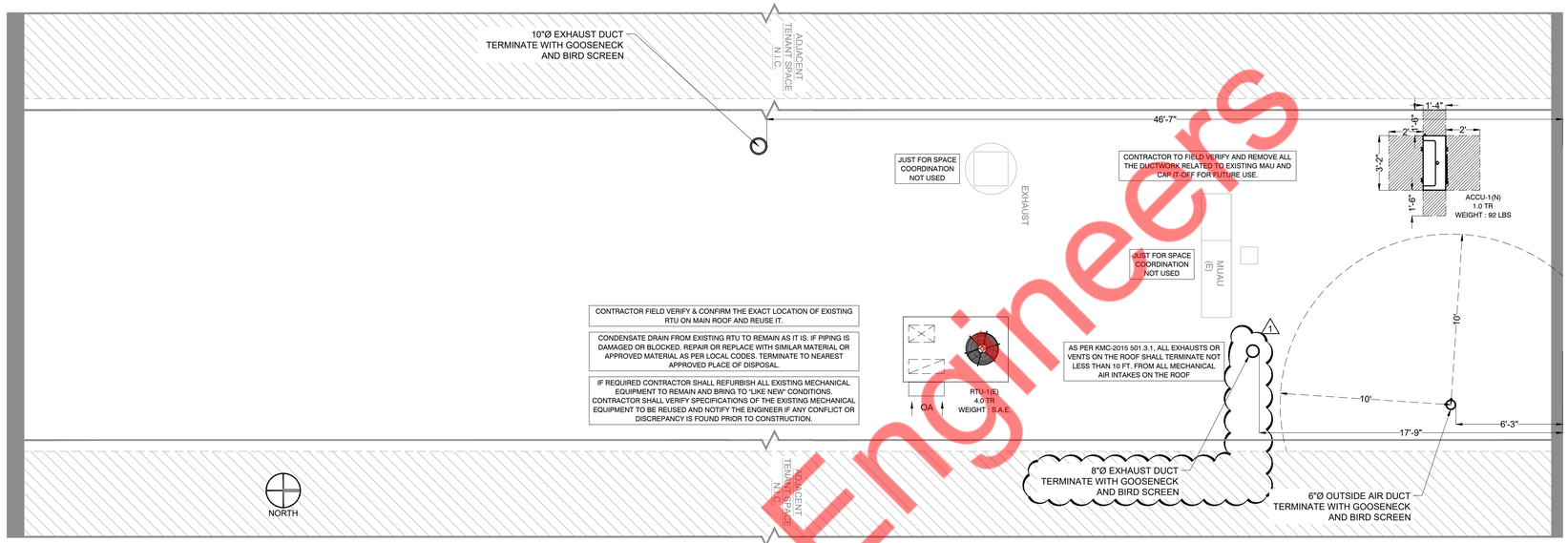
C403.2.4.2 SET POINT OVERLAP RESTRICTION
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL PROVIDE A TEMPERATURE RANGE OR DEADBAND OF AT LEAST 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS CAPABLE OF BEING SHUT OFF OR REDUCED TO A MINIMUM.
EXCEPTION: THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.

C403.2.4.3 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.

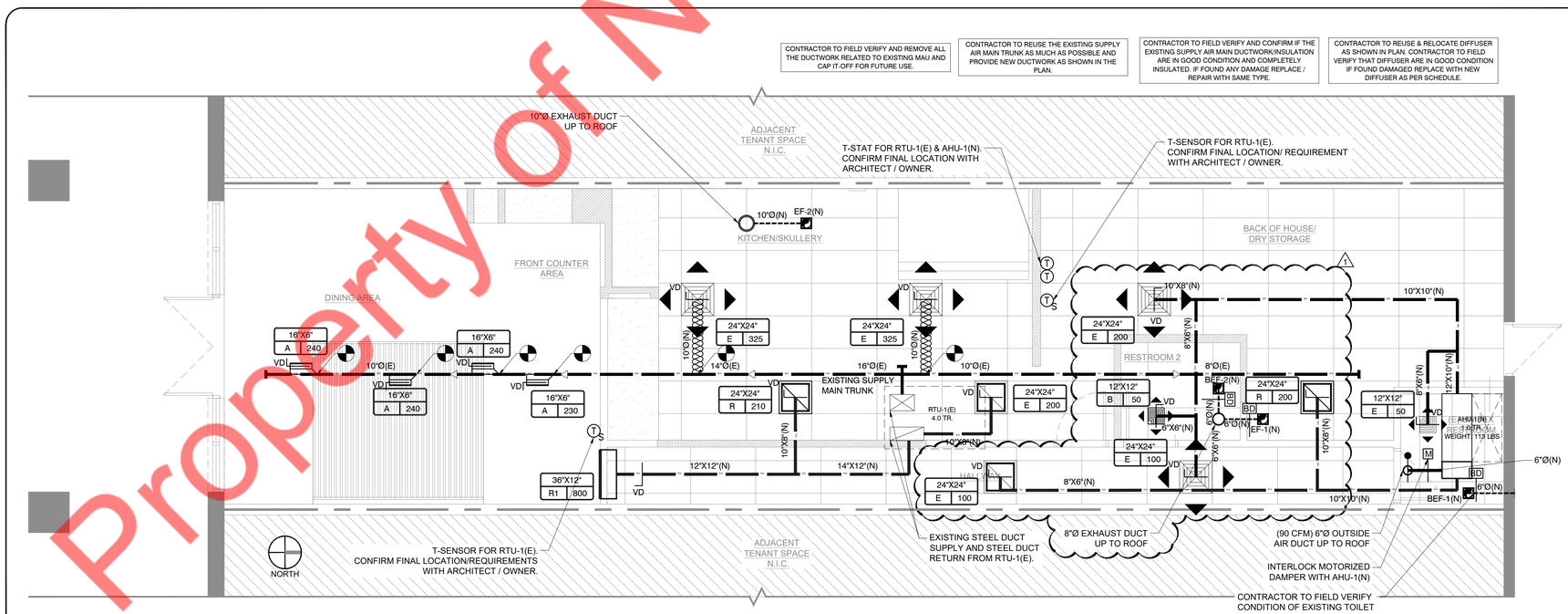
C403.2.4.3.1 THERMOSTATIC SETBACK CAPABILITIES
THERMOSTATIC SETBACK CONTROLS SHALL HAVE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.2.4.3.2 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.

C403.2.4.3.3 AUTOMATIC START CAPABILITIES
AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CAPABLE OF AUTOMATICALLY ADJUSTING THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.



HVAC ROOF PLAN | SCALE 1/4" = 1'-0" | 2



HVAC FLOOR PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

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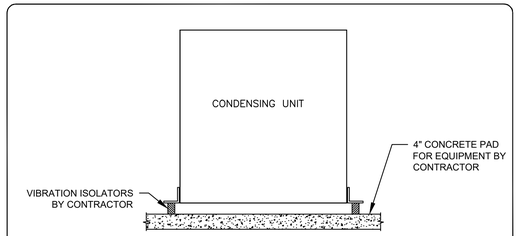
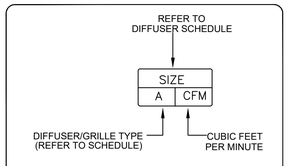
CHECKED BY: NYE

HVAC FLOOR & ROOF PLANS

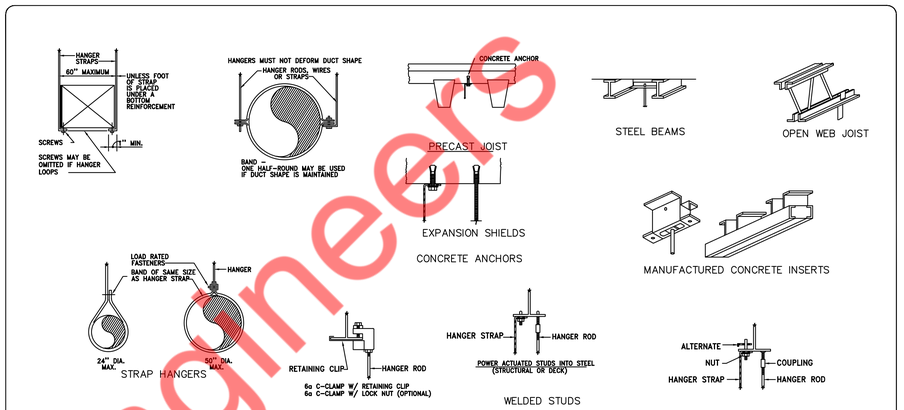
M-2



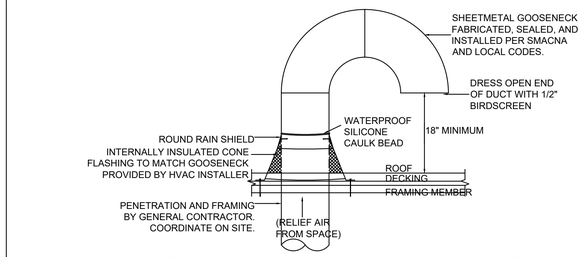
CONDENSER MOUNTING DETAIL
NOT TO SCALE



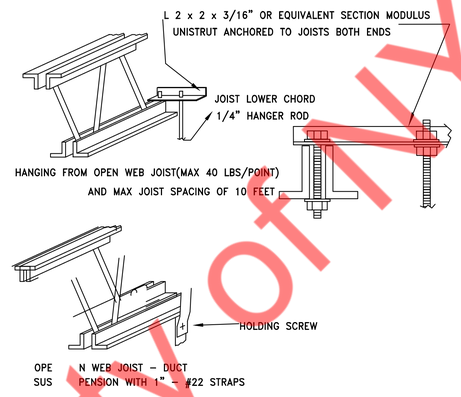
DIFFUSER/GRILLE TAG
NOT TO SCALE



UPPER & LOWER ATTACHMENTS & DEVICES
NOT TO SCALE

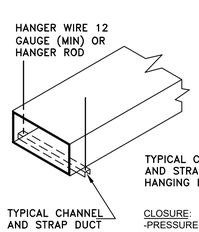


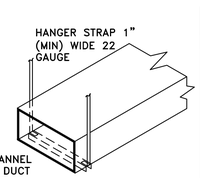
ROUND GOOSENECK DETAIL AT ROOF
NOT TO SCALE



DUCT MOUNTING DETAIL
NOT TO SCALE

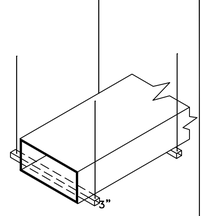
CHANNEL SELECTION		
DUCT WIDTH MIN.	CHANNEL GUAGE MIN.	CHANNEL PROFILE
LESS THAN 18"	22 3"x 2"	
LESS THAN 30"	18 3"x 2"	



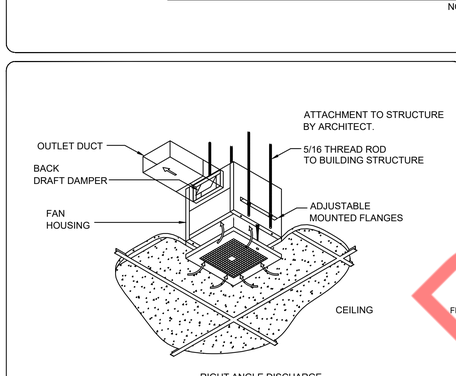


CLOSURE:
-PRESSURE SENSITIVE ALUMINUM FOIL TAPES LSITED UNDER UL 181A, PART I (P)
- HEAT ACTIVATED ALUMINUM FOIL/SCRIM TAPES LISTED UNDER UL 181A, PART II (H)
- MASTIC AND GLASS FABRIC TAPE CLOSURE SYSTEMS LISTED UNDER UL 181A, PART III (M)

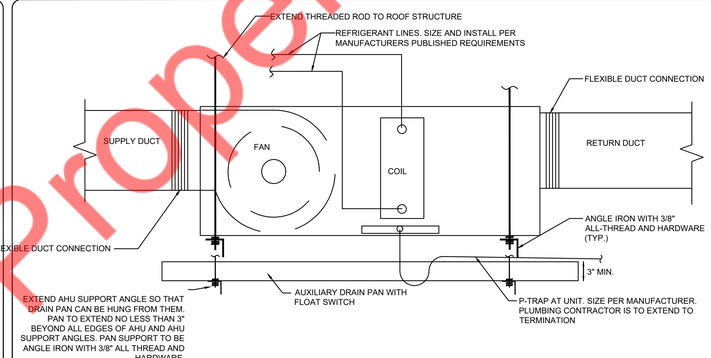
DUCT SIZE,IN.	MAXIMUM HANGER SPACING
① WIDTH 48" OR GREATER	4'–0"
② LESS THEN 48"W X 12"H	6'–0"
③ WIDTH BETWEEN 24" & 48" & HEIGHT OVER 24"	6'–0"
④ WIDTH BETWEEN 24" & 48" & HEIGHT BETWEEN 12" & 24"	8'–0"
⑤ WIDTH LESS THAN 24" & HEIGHT GREATER THAN 12"	8'–0"
DUCT REINFORCING PER SMACNA REQUIRED	



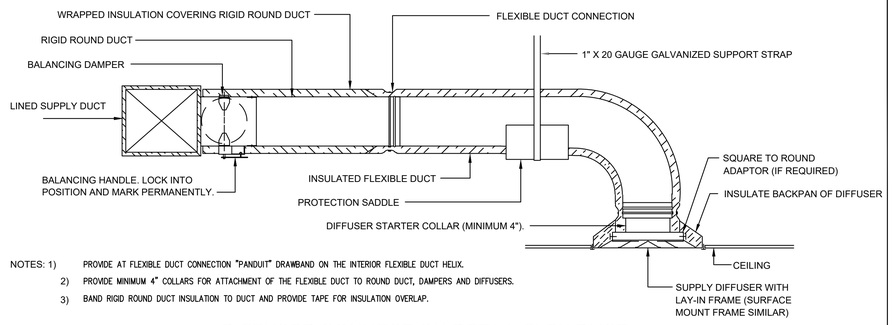
DUCT SUPPORTS
NOT TO SCALE



CEILING EXHAUST FAN DETAIL
NOT TO SCALE



TYPICAL AIR HANDLER DETAILS



NOTES: 1) PROVIDE AT FLEXIBLE DUCT CONNECTION "PANDUIT" DRAWBAND ON THE INTERIOR FLEXIBLE DUCT HELIX.
2) PROVIDE MINIMUM 4" COLLARS FOR ATTACHMENT OF THE FLEXIBLE DUCT TO ROUND DUCT, DAMPERS AND DIFFUSERS.
3) BAND RIGID ROUND DUCT INSULATION TO DUCT AND PROVIDE TAPE FOR INSULATION OVERLAP.

DIFFUSER CONNECTION DETAIL-FLEX DUCT
NOT TO SCALE

NY ENGINEERS

PROJECT

BETTER BLEND

REVISIONS DATES:
PROJECT COORD. 09.20.23

ISSUE DATE: 07.06.23
PROJECT #: 390C.1376C
DRAWN BY: NYE
CHECKED BY: NYE

MECHANICAL DETAILS

M-3

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 MAKE PROVISIONS AS 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 2017 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 THHN 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 WORKMANSHIP 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 UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C. NEMA, AND IECE.
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 WRITTEN DIRECTORIES.
37. ALL ELECTRICAL OUTLETS SHALL BE AT 18" A.F.F. EXCEPT IN THE REHEARSAL AND MULTI-PURPOSE ROOM SHALL BE AT 24" UNLESS OTHERWISE NOTED.
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 CONFIRM 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. ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
49. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
50. 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.
51. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
52. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
53. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUIDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
54. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
55. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
56. ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
57. 7-DAY 24-HOUR 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.
58. 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/TENANT'S GC AT TENANT'S SOLE EXPENSE.
59. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
60. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.
61. ALL THE ELECTRICAL BOXES SHALL BE SEALED.

SCOPE OF WORK

1. REUSE THE EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE.
2. REUSE EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER & BREAKER SWITCH IN THE EXISTING ELECTRICAL METER BANK FOR THE PROPOSED TENANT SPACE.
3. REUSE EXISTING (1) 200A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "L".
4. PROVIDE NEW ADDITIONAL 60A(M.L.O), 120/208V, 1-PHASE, 3-WIRE ELECTRICAL PANEL "M".
5. ALL NECESSARY EQUIPMENT, WIRING AND LIGHTING FOR THE PROJECT SPACE INCLUDING WIRING FOR VENTILATION EQUIPMENT. COORDINATE WITH G.C FOR LOW VOLTAGE WIRING.

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

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
J	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
$	WALL SWITCH (SINGLE, DOUBLE,)
$3	WALL SWITCH (3 WAY, 4 WAY)
$T	WALL SWITCH (TIMER)
$D	DIMMER WALL SWITCH
$OS	OCCUPANCY SENSOR WALL SWITCH
A	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED. SUFFIX DENOTES FOLLOWING: A - NEMA 5-15R B - NEMA 6-15R C - NEMA 14-30R D - NEMA 14-50R E - NEMA L6-30R
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS
	HALF SWITCHED DUPLEX RECEPTACLE
	230 VOLT RECEPTACLE
	QUADRUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH DUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH QUAD. RECEPTACLE
	FLOOR MOUNTED. FLUSH 230 VOLT RECEPTACLE
USB	USB CHARGER RECEPTACLE
CL	CEILING MOUNTED DUPLEX RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
	TELEVISION OUTLET
	TELEPHONE OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
RJ45	QUAD. DATA OUTLET RJ45
	CEILING MTD. DATA OUTLET
	NON FUSED DISCONNECT SWITCH AMPERAGE AND NUMBER OF POLES AS NOTED
SW	MOTOR SWITCH

ABBREVIATIONS:

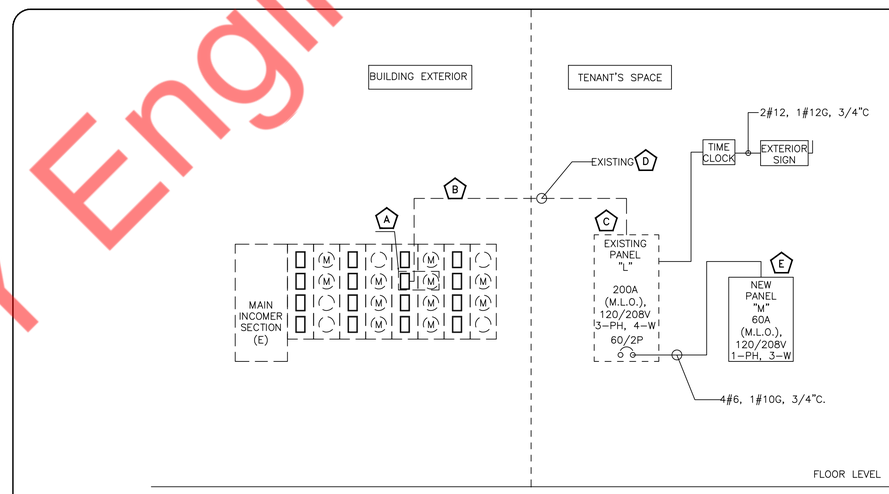
ABOVE FINISH FLOOR= A.F.F.	BELOW COUNTER= BC
COUNTER TOP LEVEL= C	PUSH BUTTON= PB
GROUND FAULT INTERRUPTER= GFCI	UNDER CABINET= UC
VERIFY PRIOR TO INSTALL= VH	NIGHT LAMP= NL
WEATHER PROOF= WP	WATER HEATER EXISTING = WH-E
RECIRCULATION PUMP= RCP	EXHAUST FAN= EF
ELECTRICAL CONTRACTOR= EC	AUTHORITY HAVING JURISDICTION= AHJ
ROOF TOP UNIT= RTU	AIR HANDLING UNIT = AHU
AIR COOLED CONDENSING UNIT= ACCU	BATHROOM EXHAUST FAN= BEF

LIGHTING FIXTURE SCHEDULE

	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	No. LAMPS	LAMP TYPE	TOTAL WATTS	MOUNTING
	B	2x2 RECESSED LAY-IN FLUORESCENT	ORACLE	22-FPL-BL-LED-2000L/3000L/4000L-DIM10-MVOLT-35K/40K/50K-85	120	1	37.4 WATTS LED	37.4	RECESSED
	C	INCANDESCENT PENDANT LIGHT	OIUSQBH	O-0815	120	4	100 WATTS LED	400	PENDANT
	D	RECESSED COMPACT FLUORESCENT	JUNO	JPDZ4 DC ALO10 SWW5WD 90CRIXXX MVOLT ZT10 FINISH	120	3	15 WATTS LED	45	PENDANT
	G	SUSPENDED LINEAR LED	TBD	TBD	120	3	62 WATTS LED	186	PENDANT
	XC	EXIT SIGN/EMERGENCY LIGHT COMBO	LITHONIA	ECR-LED	120	1	2 WATTS LED	2	WALL
	EU	WALL-MOUNTED EMERGENCY LIGHTS	LITHONIA	ELM-2	120	2	3 WATTS LED	6	WALL
$T	T	TIMER WALL SWITCH	LEVITON	6124	120	-	-	-	-
$OS		OCCUPANCY WALL SWITCH	LEVITON	ODS10	120	-	-	-	-
OS		CEILING OCCUPANCY SENSOR	LEVITON	O2C10-UDW	120	-	-	-	-
DS		DAYLIGHT SENSOR	-	-	-	-	-	-	-
	(E)	EXISTING FIXTURE SHALL REMAIN	-	-	-	-	-	-	-
	(R)	EXISTING FIXTURE REUSED AND RELOCATED	-	-	-	-	-	-	-

GENERAL NOTES:

1. E.C. SHALL RECEIVE APPROVAL FROM ARCHITECTURE FOR LIGHTING FIXTURE SELECTION BEFORE PURCHASE AND INSTALLATION.
2. ALL THE LIGHTING FIXTURE TYPES, QUANTITIES, AND TYPES OF CONTROLS SHALL BE COORDINATED WITH THE OWNER/ARCHITECT BEFORE COMMENCING ANY WORK. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.



ELECTRICAL RISER KEYED NOTES:

A. EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER AND BREAKER SWITCH IN THE EXISTING METER BANK FOR THE PROJECT SPACE SHALL REMAIN. E.C. SHALL COORDINATE WITH BASE BUILDING FOR THE EXACT LOCATION OF THE EXISTING METER BANK AND EXACT POWER DISTRIBUTION IN THE FILED. E.C SHALL VERIFY THE OPERABLE CONDITION OF EXISTING METER & BREAKER SWITCH, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

B. EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL INCOMING SERVICE TO THE ELECTRICAL PANEL "L" FOR THE PROJECT SPACE FROM THE EXISTING ELECTRICAL METER BANK. E.C. SHALL GET INFORMATION ABOUT THE EXISTING POWER DISTRIBUTION PRIOR TO COMMENCING ANY WORK AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.

C. EXISTING 200A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "L" TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

D. EXISTING INCOMING FEEDER TO REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF FEEDER IN FIELD AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

E. NEW 60A(M.L.O), 120/208V, 1-PHASE, 3-WIRE ELECTRICAL PANEL "M". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

ELECTRICAL RISER SYMBOLS

- NEW
- EXISTING ITEM/FEEDER TO REMAIN
- EXISTING ITEM/FEEDER TO BE DISCONNECTED & REMOVED

ELECTRICAL GENERAL NOTES:

1. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSES ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY.
2. E.C. SHALL VERIFY INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.
3. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (Isc) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.
4. E.C. TO VERIFY OPERABLE CONDITIONS OF EXISTING DEVICES IN FIELD. REPLACE/RECTIFY IF FOUND IN OPERABLE. BASE BID ACCORDINGLY.
5. EXISTING ELECTRICAL DISTRIBUTION TO BE MAINTAINED AND UTILIZED TO SERVE PROJECT SPACE.

ELECTRICAL RISER | SCALE N.T.S. | 1

NY ENGINEERS

PROJECT

BETTER BLEND

REVISIONS DATES:
1 PROJECT COORD. 09.20.23

ISSUE DATE: 07.06.23
PROJECT #: 390C.1376C
DRAWN BY: NYE
CHECKED BY: NYE

LIGHTING LEGEND, NOTES & RISER DIAGRAM

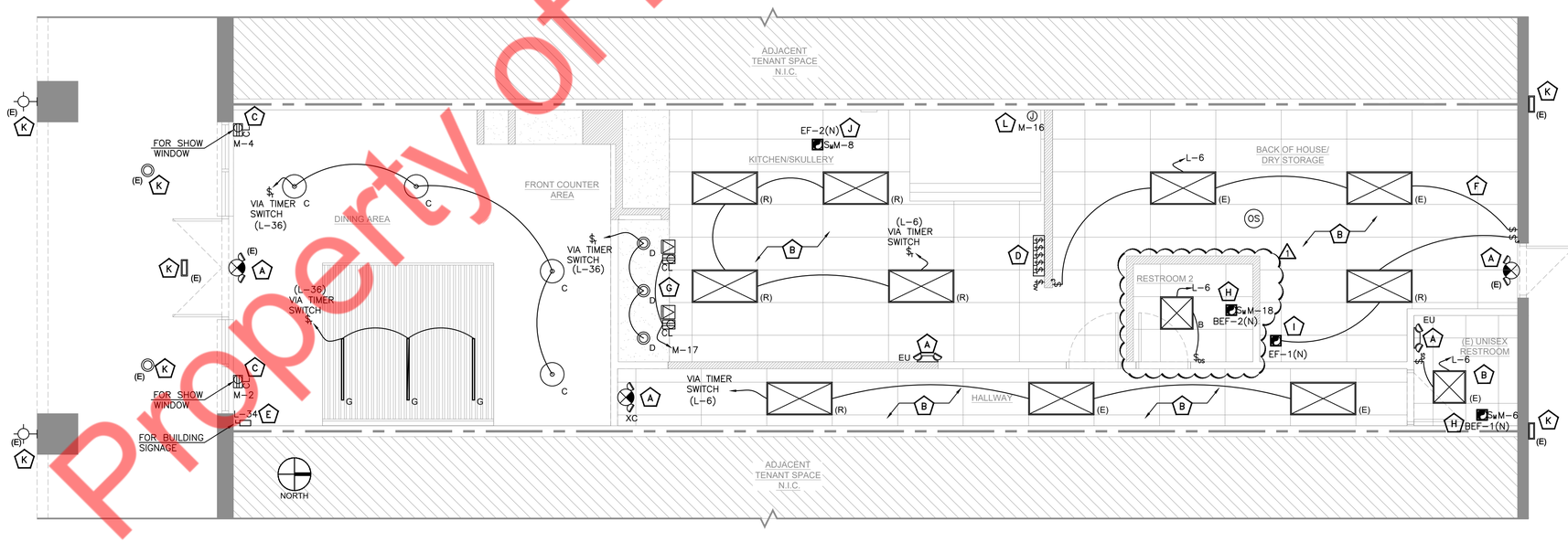
E-1

ELECTRICAL LIGHTING PLAN GENERAL NOTES:

1. COORDINATE FINAL FIXTURE MAKE & MODEL WITH ARCHITECT/OWNER.
2. ALL LIGHT FIXTURES CONSIDERED TO BE AS 120 VOLT FIXTURE. E.C. SHALL INFORM ENGINEER ON RECORD OTHERWISE.
3. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.
4. ALL THE LIGHTING FIXTURE TYPES, QUANTITIES, AND TYPES OF CONTROLS SHALL BE COORDINATED WITH THE OWNER/ARCHITECT BEFORE COMMENCING ANY WORK. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.
5. E.C. TO PROVIDE MANUAL OVERRIDE SWITCH AS PER IECC 2012. E.C. TO COORDINATE THE LOCATION WITH ARCHITECT/OWNER.
6. CONNECT EXISTING LIGHTING FIXTURE TO EXISTING LIGHTING CIRCUIT IN SAME AREA VIA EXISTING LIGHTING CONTROLS. E.C. TO VERIFY THE OPERABLE CONDITION OF EXISTING ELECTRICAL CIRCUIT & EXISTING LIGHTING CONTROL IN FIELD. E.C. TO ENSURE THAT EXISTING LIGHTING CONTROL IS COMPLYING WITH IECC–2012 REQUIREMENTS. UPDATE/PROVIDE NEW CONTROLS AS REQUIRED. BASE BID ACCORDINGLY.

ELECTRICAL LIGHTING PLAN KEYED NOTES:

- (A) CONNECT ALL EMERGENCY EGRESS FIXTURE, EXIT SIGNS FIXTURES TO THE NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS AS PER STATE AND LOCAL CODES.
- (B) EXISTING LIGHT FIXTURE DENOTED BY (E) SHALL REMAIN AND THE EXISTING FIXTURE DENOTED BY (R) SHALL BE RELOCATED AS SHOWN. ELECTRICAL SHALL VERIFY THE EXACT EXISTING LIGHTING CONTROLS PROVIDED, THEIR OPERATING CONDITIONS IN FIELD. THE EXISTING LIGHTING CONTROLS SHALL BE IN COMPLIANCE WITH IECC CODES. PROVIDE NEW CONTROLS AS SHOWN ON THE PLANS IF REQUIRED. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES/ISSUES BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- (C) PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
- (D) COORDINATE EXACT LOCATION OF TIMER SWITCH BANK WITH OWNER/ ARCHIECT.
- (E) E.C. TO COORDINATE THE BUILDING SIGNAGE CONNECTION REQUIREMENTS WITH SIGN VENDOR. BASE BID ACCORDINGLY.
- (F) LIGHTING CONTROL IN THIS AREA SHALL NOT BE WITH AUTOMATIC MEANS AS PER NEC 110.26(D).
- (G) PROVIDE (1) DUPLEX RECEPTACLE AND (1) CAT6 DATA CABLE AND CONNECTION TO EACH MENU BOARD. E.C TO COORDINATE WITH ARCHITECT/OWNER FOR LOCATION, MOUNTING HEIGHT AND ADDITIONAL POWER AND DATA REQUIREMENTS FOR MENU BOARD PRIOR COMMENCING WORK. BASE BID ACCORDINGLY.
- (H) INTERCONNECT EXHAUST FANS BEF–1(N) & BEF–2(N) WITH AHU–1(N). E.C TO COORDINATE WITH MECHANICAL DRAWINGS.
- (I) INTERCONNECT EXHAUST FANS EF–1(N) WITH ROOM LIGHTS. E.C TO COORDINATE WITH MECHANICAL DRAWINGS. (1)
- (J) INTERCONNECT EXHAUST FANS EF–2(N) WITH RTU–1(E). E.C TO COORDINATE WITH MECHANICAL DRAWINGS.
- (K) EXISTING LIGHT FIXTURE IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO THE RESPECTED EXISTING ELECTRICAL HOUSE PANEL ALONG WITH THEIR CONTROLS. E.C. TO COORDINATE WITH OWNER/ARCHITECT. ALSO VERIFY THEIR OPERABLE CONDITION IN FIELD AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- (L) EXISTING HOOD LIGHTS AND CONTROL PANEL SHALL REMAIN CONNECTED TO THE RESPECTED EXISTING ELECTRICAL PANEL ALONG WITH THEIR CONTROLS. E.C. TO COORDINATE WITH OWNER/VENDOR FOR ANY REQUIREMENT. ALSO VERIFY THEIR OPERABLE CONDITION IN FIELD AND REPLACE IF FOUND INOPERABLE. IF REQUIRED PROVIDE 120V DEDICATED CIRCUIT FOR EXISTING HOOD LIGHTING & CONTROL PANEL FROM THE NEW PANEL "M" AS SHOWN IN THE DRAWING. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES/ISSUES BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.



LIGHTING PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

BETTER BLEND

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LIGHTING PLAN

E-2

ELECTRICAL POWER PLAN KEYED WORK NOTES:

A. E.C. SHALL COORDINATE WITH LOW VOLTAGE VENDOR FOR EXACT QUANTITY AND POWER REQUIREMENTS FOR LOW VOLTAGE EQUIPMENTS PRIOR TO ROUGH–IN. BASE BID ACCORDINGLY.

B. JUNCTION BOX FOR HAND DRYER. COORDINATE LOCATION AND MOUNTING HEIGHT WITH ARCHITECT/OWNER.

C. POWER FOR TV. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT POWER REQUIREMENT, LOCATION AND MOUNTING HEIGHT OF THE RECEPTACLES IN THE FIELD.

D. EXISTING 200A(M.L.O.), 120/208V, 3–PHASE, 4–WIRE ELECTRICAL PANEL "L" TO REMAIN. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

E. NEW 60A(M.L.O.), 120/208V, 1–PHASE, 3–WIRE ELECTRICAL PANEL "M". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

F. E.C. SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH 2017 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.

G. EXISTING WATER HEATER TO REMAIN. E.C SHALL VERIFY OPERABLE CONDITION OF THE ELECTRICAL CONNECTION AND ELECTRICAL FIXTURE ON FIELD. EXISTING WATER HEATER SHALL BE CONNECTED TO THE ELECTRICAL PANEL "L". REPLACE IF INOPERABLE. BASE BID ACCORDINGLY. E.C SHALL COORDINATE WITH OWNER/PLUMBING CONTRACTOR FOR THE EXACT LOCATION OF WATER HEATER AND ITS ELECTRICAL CONNECTION IN FIELD.

H. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL EQUIPMENTS WITH MECHANICAL DRAWINGS.

I. 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.

J. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WATER HEATER MANUFACTURER FOR THE EXACT POWER REQUIREMENTS PRIOR TO ROUGH–IN. BASE BID ACCORDINGLY. (1)

ELECTRICAL POWER PLAN GENERAL NOTES:

1. E.C. SHALL COORDINATE WITH THE EQUIPMENT VENDOR FOR EXACT RECEPTACLE REQUIREMENT AND WITH ARCHITECT/OWNER FOR EXACT LOCATION AND MOUNTING HEIGHT OF THE RECEPTACLES IN THE FIELD.
2. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR EXACT HEIGHT OF OUTLETS.
3. E.C SHALL VERIFY ANY THIRD PARTY INSPECTION REQUIRED BY THE LOCAL JURISDICTION PRIOR TO BIDDING THIS PROJECT.
4. ALL LOW VOLTAGE WIRING TO BE IN CONDUIT U.N.O BY AHJ.

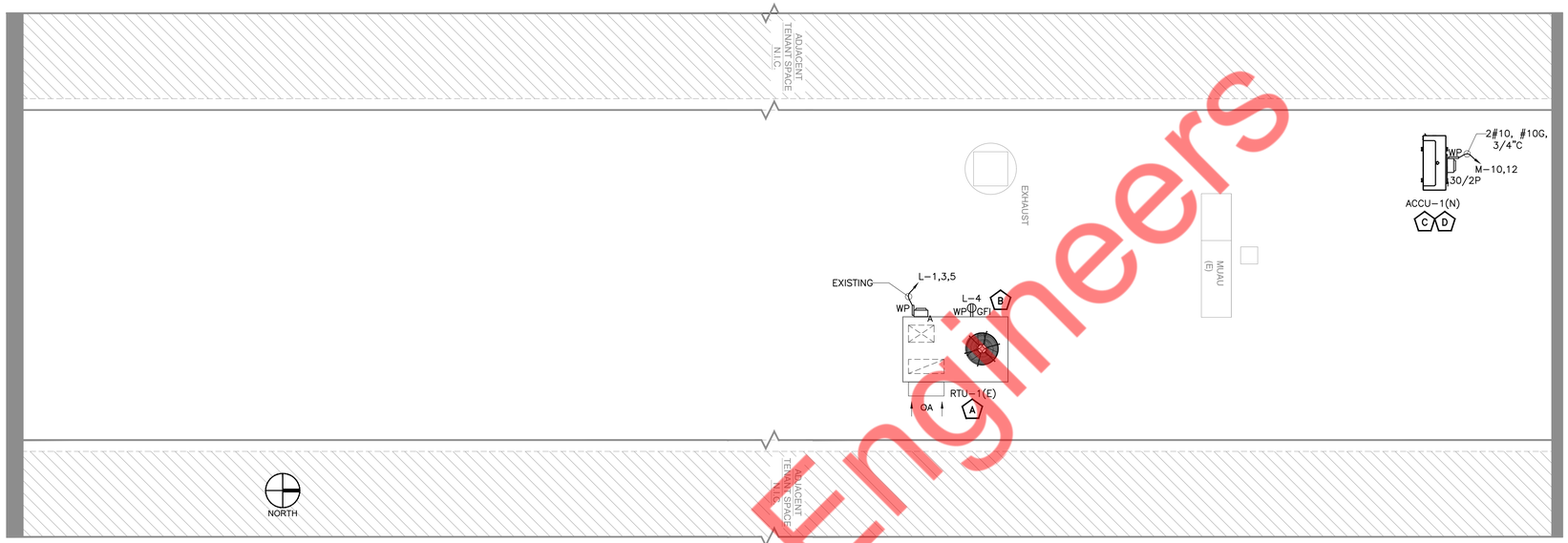
ELECTRICAL ROOF POWER PLAN KEYED WORK NOTES:

A. EXISTING MECHANICAL EQUIPMENT WITH ITS ELECTRICAL CONNECTION AND ELECTRICAL FIXTURE TO REMAIN. E.C. SHALL VERIFY OPERABLE CONDITION OF ELECTRICAL CONNECTION AND ELECTRICAL FIXTURE ON FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY. E.C. SHALL COORDINATE WITH LANDLORD FOR THE EXACT LOCATION OF RTU AND ITS ELECTRICAL CONNECTIONS ON FIELD.

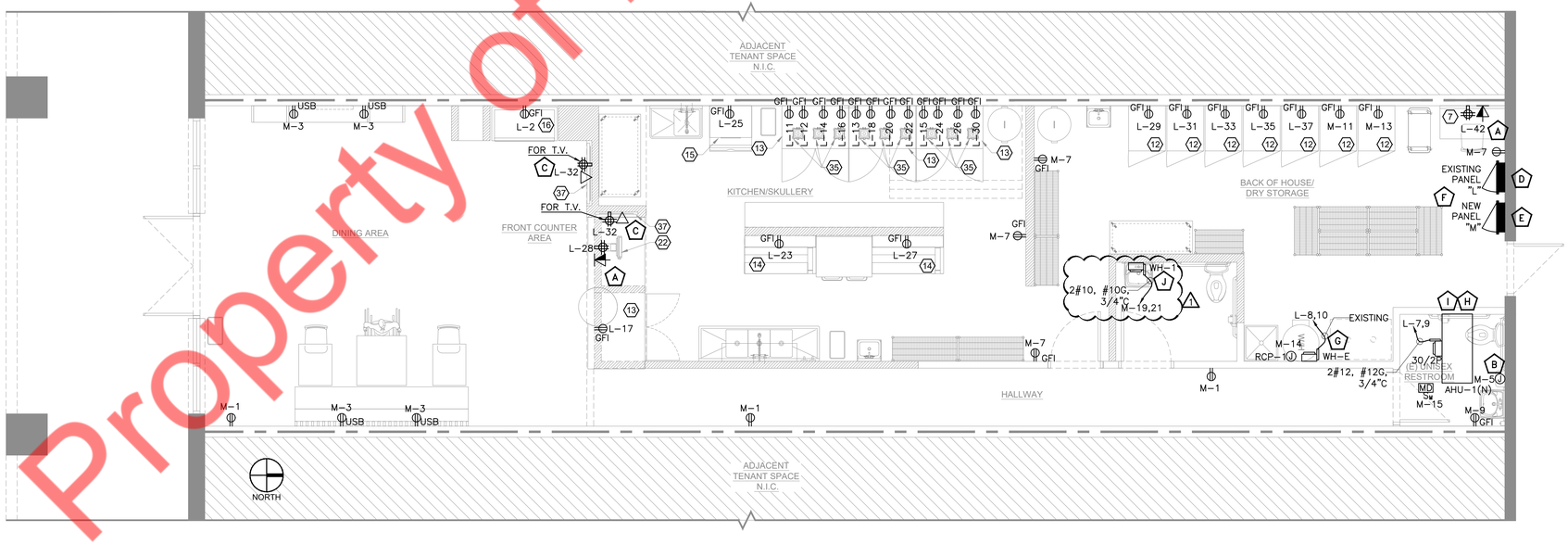
B. EXISTING ROOF OUTLETS SHALL REMAIN WITH ITS BRANCH CIRCUITS. E.C. SHALL COORDINATE IN FIELD THE EXACT LOCATION AND OPERABLE CONDITIONS OF THE SAME AND PROVIDE NEW IF FOUND INOPERABLE AS SHOWN ON THE DRAWINGS. BASE BID ACCORDINGLY.

C. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL EQUIPMENTS WITH MECHANICAL DRAWINGS.

D. 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.



ROOF PLAN | SCALE 1/4" = 1'-0" | 2



POWER PLAN | SCALE 1/4" = 1'-0" | 1

NY ENGINEERS

PROJECT

BETTER BLEND

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FLOOR AND ROOF ELECTRICAL POWER PLAN

E-3

PANEL SCHEDULE:

PANEL:	L(E)									MOUNTING:	RECESSED
208Y/120	VOLTS,	3	PHASE,	4	WIRE					PANEL LOCATION:	BOH
MAIN CB	NA	MLO:	200A	BUS:	EXISTING	MIN,				FED FROM:	EXISTING METER/DISCONNECT

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	PER PHASE (KVA) B	PER PHASE (KVA) C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	30/3P	EXISTING (RTU)	H	2.88	EXISTING	4.32			2#12, #12G, 3/4"C	1.44	E	OPEN DISPLAY MERCHANDISER_(#16)	20	2
3			H	2.88			3.06		EXISTING	0.18	R	EXISTING (ROOFTOP GFI)	20	4
5			H	2.88				3.38	2#12, #12G, 3/4"C	0.50	E	EXISTING (LIGHTING)	20	6
7	20/2P	AHU-1(N)	H	1.72	2#10, #10G, 3/4"C	3.97			EXISTING	2.25	O	WH-E (EXISTING WATER HEATER)	30/2P	8
9			H	1.72			3.97			2.25	O			10
11	20	UNDERCOUNTER REF_(#13)	E	0.26	2#12, #12G, 3/4"C			1.76	2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	12
13	20	UNDERCOUNTER REF_(#13)	E	0.26	2#12, #12G, 3/4"C	1.76			2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	14
15	20	UNDERCOUNTER REF_(#13)	E	0.26	2#12, #12G, 3/4"C		1.76		2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	16
17	20	UNDERCOUNTER REF_(#13)	E	0.26	2#12, #12G, 3/4"C			1.76	2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	18
19	20/2P	SPARE				1.50			2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	20
21							1.50		2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	22
23	20	DIPPING CABINET_(#14)	E	0.23	2#12, #12G, 3/4"C			1.73	2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	24
25	20	ICE MAKER, CUBE-STYLE_(#15)	E	1.64	2#12, #12G, 3/4"C	3.14			2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	26
27	20	DIPPING CABINET_(#14)	E	0.23	2#12, #12G, 3/4"C		0.59		2#12, #12G, 3/4"C	0.36	R	FRONT COUNTER : POS_(#22)	20	28
29	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C			1.74	2#12, #12G, 3/4"C	1.50	E	COMMERCIAL BLENDERS_(#35)	20	30
31	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C	0.96			2#12, #12G, 3/4"C	0.72	R	WALL MOUNTED TV RECEPTACLE_(#37)	20	32
33	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C		1.44		2#12, #12G, 3/4"C	1.20	L	EXTERIOR SIGNAGE/TIMECLOCK	20	34
35	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C			0.74	2#12, #12G, 3/4"C	0.50	L	LIGHTING - FRONT DINING AREA	20	36
37	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C	0.24						EXISTING	15	38
39	60/2P	PANEL "M"	O	4.33	4#6, #10G, 3/4"C		4.33					EXISTING	35	40
41			O	4.33				4.69	2#12, #12G, 3/4"C	0.36	R	COMPUTER DESK_(#7)	20	42
TOTAL CONNECTED LOAD (KVA)						15.89	16.65	15.79						

A

PANEL:	M(N)									MOUNTING:	SURFACE
208Y/120	VOLTS,		1 - PHASE	3	WIRE					PANEL LOCATION:	BOH
MAIN CB	NA	MLO:	60A	BUS:	100A	MIN,				FED FROM:	PANEL L(E.)

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	PER PHASE (KVA) B	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	RECEPTACLE-GENERAL	R	0.54	2#12, #12G, 3/4"C	1.74		2#12, #12G, 3/4"C	1.20	R	RECEPTACLE-SHOW WINDOW	20	2
3	20	RECEPTACLE-USB	R	0.72	2#12, #12G, 3/4"C		1.92	2#12, #12G, 3/4"C	1.20	R	RECEPTACLE-SHOW WINDOW	20	4
5	20	HAND DRYER	O	1.00	2#12, #12G, 3/4"C	1.02		2#12, #12G, 3/4"C	0.02	O	BEF-1(N)	20	6
7	20	RECEPTACLE-GENERAL	R	0.72	2#12, #12G, 3/4"C		1.10	2#12, #12G, 3/4"C	0.38	O	EF-2N)	20	8
9	20	RECEPTACLE-RESTROOM	R	0.18	2#12, #12G, 3/4"C	1.32		2#10, #10G, 3/4"C	1.14	H	ACCU-1(N)	30/2P	10
11	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C		1.39		1.14	H			12
13	20	REACH-IN FREEZER_(#12)	E	0.24	2#12, #12G, 3/4"C	0.33		2#12, #12G, 3/4"C	0.09	R	RCP-1	20	14
15	20	MOTORIZED DAMPER	O	0.02	2#12, #12G, 3/4"C		0.52	2#12, #12G, 3/4"C	0.50	L	HOOD LIGHTS	20	16
17	20	MENU DISPLAY RECEPTACLE	R	0.36	2#12, #12G, 3/4"C	0.38		2#12, #12G, 3/4"C	0.02	O	BEF-2(N)	20	18
19	30/2P	WATER HEATER (WH-1)(NEW)	O	2.05	2#10, #10G, 3/4"C		2.05				SPARE	20	20
21						2.05					SPARE	20	22
23	20	SPARE					0.00				SPARE	20	24
TOTAL CONNECTED LOAD (KVA)						6.85	6.98						

1

PANEL SCHEDULE KEYED WORK NOTES:

A. ALL CIRCUITING SHOWN IN PANEL "L" FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY CIRCUITING OF THE EXISTING DEVICES IN FIELD AND INFORM ENGINEER FOR DISCREPANCIES.

B. ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND INCOMING FEEDER SIZE.

C. E.C. SHALL PROVIDE NEW CIRCUIT BREAKERS IN PLACE OF EXISTING CIRCUIT BREAKERS WHEREVER NECESSARY TO BE IN LINE WITH THE PANEL SCHEDULE.

D. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBER & BREAKER SIZE OF EXISTING DEVICES IN FIELD.

E. E.C. SHALL VERIFY THE EXISTING EQUIPMENT LOAD & RATINGS IN FIELD AND ACCORDINGLY CONSIDER THE ELECTRICAL LOAD IN PANEL BOARD SCHEDULE.

PANEL SCHEDULE KEYED WORK NOTES:

A E.C. TO PROVIDE (1) 60/2P BREAKER IN PLACE OF EXISTING (2) 20/1P BREAKERS. BASE BID ACCORDINGLY.

EQUIPMENT SCHEDULE:

ITEM NO.	DESCRIPTION	VOLTAGE	PHASE	AMPS	kW
12	REACH-IN FREEZER	115	1	2.10	0.24
13	UNDERCOUNTER REFIGERATOR	115	1	2.30	0.26
14	DISPLAY DIPPING CASE	115	1	2.00	0.23
15	ICE MAKER, CUBE STYLE	115	1	14.30	1.64
16	OPEN DISPLAY MERCHANDISER	120	1	12.00	1.44
22	P.O.S.	115	1	3.1	0.36
35	COMMERCIAL BLENDER	115	1	13.00	1.50
37	WALL MOUNTED TV	115	1	6.30	0.72

NY ENGINEERS

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PANEL SCHEDULES

SCOPE OF WORK

PROVIDE ALL PLUMBING FOR NEW SMOOTHIE SHOP WITHIN AN EXISTING BUILDING, INCLUDING ALL WATER, GREASE, SANITARY & VENT LINES AND CONNECT TO EXISTING UTILITIES. EXISTING ELECTRIC STORAGE WATER HEATER AND GREASE INTERCEPTOR TO BE REMAIN. EXISTING GAS NETWORK TO REMAIN. PROVIDE NEW POINT OF USE WATER HEATER.

COORDINATE WITH G.C. AND MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSING WATER 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 "L" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANSI/NSF STANDARD 61.
13. SOIL, WASTE AND VENT 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 WATER 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. STUDOR MINI/MAXI 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 CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB IN PVC SCH 40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVC 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 2020 KENTUCKY STATE PLUMBING CODE.
29. WATER HAMMER ARRESTORS AS PER 2020 KENTUCKY STATE PLUMBING CODE.
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.

PLUMBING LEGEND

SAN	SANITARY SEWER PIPING (UNDERGROUND)
GSAN	GREASE SANITARY SEWER PIPING (UNDERGROUND)
V	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
EX.CW	EXISTING COLD WATER PIPING
EX.HW	EXISTING HOT WATER PIPING
	PIPE RISE
	PIPE DROP
	CAPPED END OF PIPE
FCO	FLOOR CLEAN OUT
	P-TRAP
S.O.V.	SHUT - OFF VALVE
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
WCO	WALL CLEAN OUT
EX. FD	EXISTING FLOOR DRAIN
	GATE VALVE
FD	FLOOR DRAIN
	BALANCING VALVE
	POINT OF CONNECTION
I.W.	INDIRECT WASTE
	FLOOR SINK
	THERMOSTATIC MIXING VALVE

KITCHEN EQUIPMENT SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER Hot	WATER Cold	WASTE Direct	WASTE Indirect
26	1	3 COMPARTMENT SINK*	JOHN BOOS	E3S8-18-14T24X				1-1/2"
25	1	FAUCET FOR 3 COMP SINK	T&S BRASS	B-0133-B	3/4"+	3/4"		
29	1	1 COMPARTMENT SINK*	JOHN BOOS	1B16204-1D18L-X	1/2"++	1/2"		1-1/2"
15	1	ICE MACHINE	SCOTSMAN	C0330MA-1		1/2"		3/4"
30	2	HAND SINK	JOHN BOOS	PBHS-W-0909-P-SSLR-X	1/2"++	1/2"	1-1/2"	
32	1	MOP SINK		EXISTING TO REMAIN			E	
31	1	FAUCET FOR MOP SINK		EXISTING TO REMAIN	E	E		
FS	3	FLOOR SINK	ZURN	Z1900-23-31 (ZS1900 IF IN EXPOSED AREAS)			3"	
FD	1	FLOOR DRAIN	ZURN	ZS415 W/ TYPE BS STRAINER			4"	
TMV	3	THERMAL MIXING VALVE	WATTS	LFMMV	1/2"	1/2"		

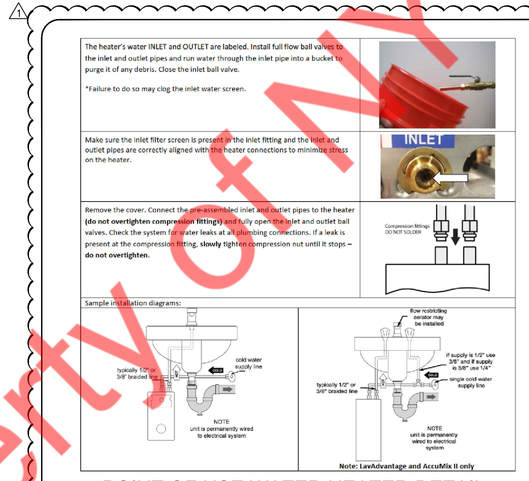
+ HOT WATER 140°F, ++ PROVIDE TMV AS PER SCHEDULE, *LEVER WASTE VALVE REQUIRED,

1

RESTROOM FIXTURE SCHEDULE

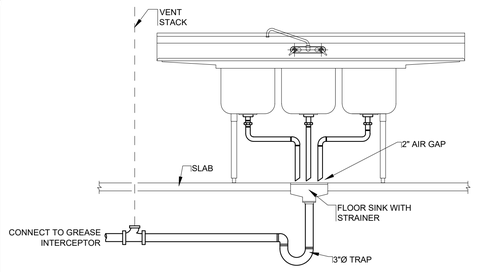
Item No.	Qty.	Description	Manufacturer	Model	WATER Hot	WATER Cold	WASTE Waste	Usage	Spec
A	1	WATER CLOSET		EXISTING TO REMAIN		E	E		
A1	1	WATER CLOSET	AMERICAN STANDARD	2386.010		3/4"	4"		
B	1	LAVATORY		EXISTING TO REMAIN			E		
B1	1	LAVATORY	AMERICAN STANDARD	LUCERNE 0355.012			2"		
C	1	LAVATORY FAUCET		EXISTING TO REMAIN	E	E			
C1	1	LAVATORY FAUCET	KOHLER	K-28124-4N	1/2"	1/2"		0.5	GPM

1



POINT OF USE WATER HEATER DETAIL

NOT TO SCALE



3 COMPARTMENT SINK DETAIL

NOT TO SCALE

GREASE INTERCEPTOR SIZING

TAG	DESCRIPTION	QTY	DIMENSIONS LENGTH	WIDTH	DEPTH	VOLUME CU IN	GALLONS	%USAGE	GPM 1 MIN	GPM 2 MIN
26	3 COMP SINK	01	18	18	14	13608	58.92	0.75	44.19	22.10
29	1 COMP SINK	01	16	20	14	4480	19.40	0.75	14.55	7.27
30	HAND SINK	01	09	09	05	4200	11.18	0.75	13.63	6.82
							TOTAL GPM		72.38	36.19

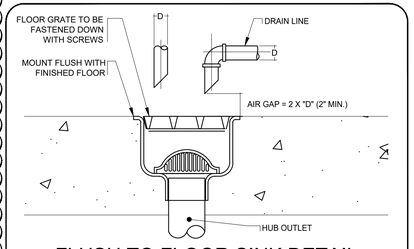
ENERGY CONSERVATION NOTES

1. AS PER 2012 KENTUCKY ENERGY CONSERVATION CODE (2012 IECC), SECTION C404.3 THE OUTLET TEMPERATURE OF LAVATORIES IN PUBLIC FACILITY RESTROOMS SHALL BE LIMITED TO 110°F (43°C).
2. AS PER 2012 KENTUCKY ENERGY CONSERVATION CODE (2012 IECC), SECTION C404.4 AUTOMATIC TIME SWITCHES SHALL BE INSTALLED TO AUTOMATICALLY SWITCH OFF THE RECIRCULATING HOT WATER SYSTEM OR HEAT TRACE.
3. AS PER 2012 KENTUCKY ENERGY CONSERVATION CODE (2012 IECC), SECTION C404.5 FOR AUTOMATIC-CIRCULATING HOT WATER SYSTEMS, PIPING SHALL BE INSULATED WITH NOT LESS THAN 1 INCH OF INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H × FT2 × °F. THE FIRST 8 FEET OF PIPING IN NON-CIRCULATING SYSTEMS SERVED BY EQUIPMENT WITHOUT INTEGRAL HEAT TRAPS SHALL BE INSULATED WITH 0.5 INCH OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU PER INCH/H × FT2 × °F.
4. AS PER 2012 KENTUCKY ENERGY CONSERVATION CODE (2012 IECC), SECTION C404.6 CONTROLS ARE INSTALLED THAT LIMIT THE OPERATION OF A RECIRCULATION PUMP INSTALLED TO MAINTAIN TEMPERATURE OF A STORAGE TANK.

EXISTING CONTIDITONS NOTES

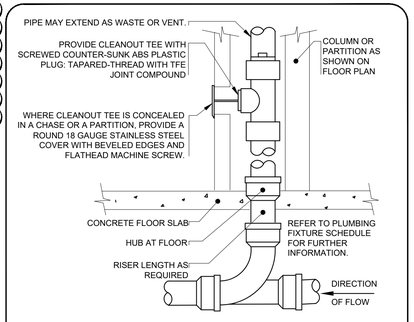
STOP AND READ

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

NOT TO SCALE



WALL CLEANOUT DETAIL

NOT TO SCALE

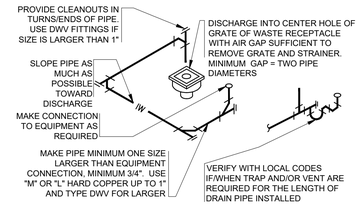
WALL CLEANOUT DETAIL NOTES

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.

1

ENERGY CONSERVATION NOTES

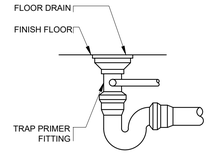
1. AS PER 2012 INTERNATIONAL ENERGY CONSERVATION CODE, SECTION C404.3 THE OUTLET TEMPERATURE OF LAVATORIES IN PUBLIC FACILITY RESTROOMS SHALL BE LIMITED TO 110°F (43°C).



ROUTE PIPE INCONSPICUOUSLY AND UNOBTRUSIVELY. 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 DETAIL

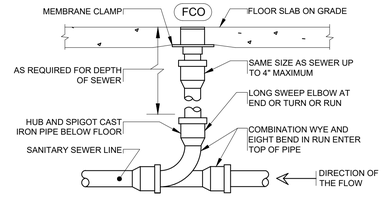
NOT TO SCALE



FLOOR DRAIN

TRAP RESEAL DETAIL

NOT TO SCALE

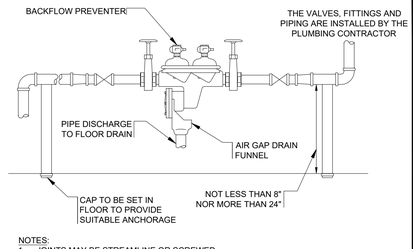


FLOOR CLEANOUT DETAIL

NOT TO SCALE

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



NOTES:
1. JOINTS MAY BE STREAMLINE OR SCREWED.
2. THE CONTRACTOR TO PROVIDE TESTING AND CERTIFICATION OF BACKFLOW PREVENTER AS PER STATE REQUIREMENTS.

BACKFLOW PREVENTER DETAIL

NOT TO SCALE

NY ENGINEERS

PROJECT

BETTER BLEND

REVISIONS DATES:
1 PROJECT COORD. 09.20.23

ISSUE DATE: 07.06.23
PROJECT #: 390C.1376C
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PLUMBING LEGENDS,NOTES & DETAILS

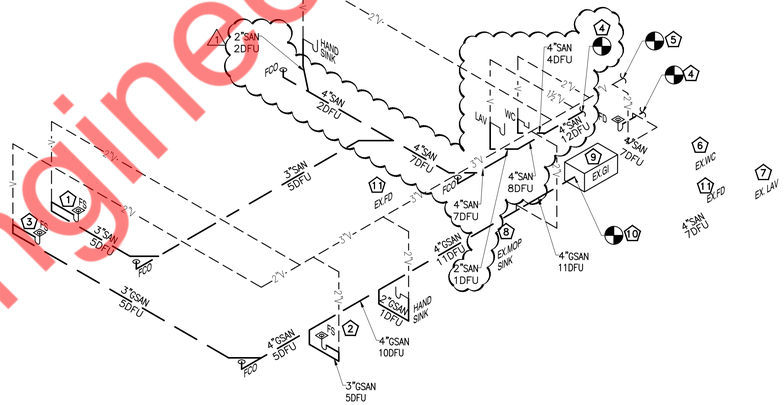
P-1

SANITARY KEY NOTE

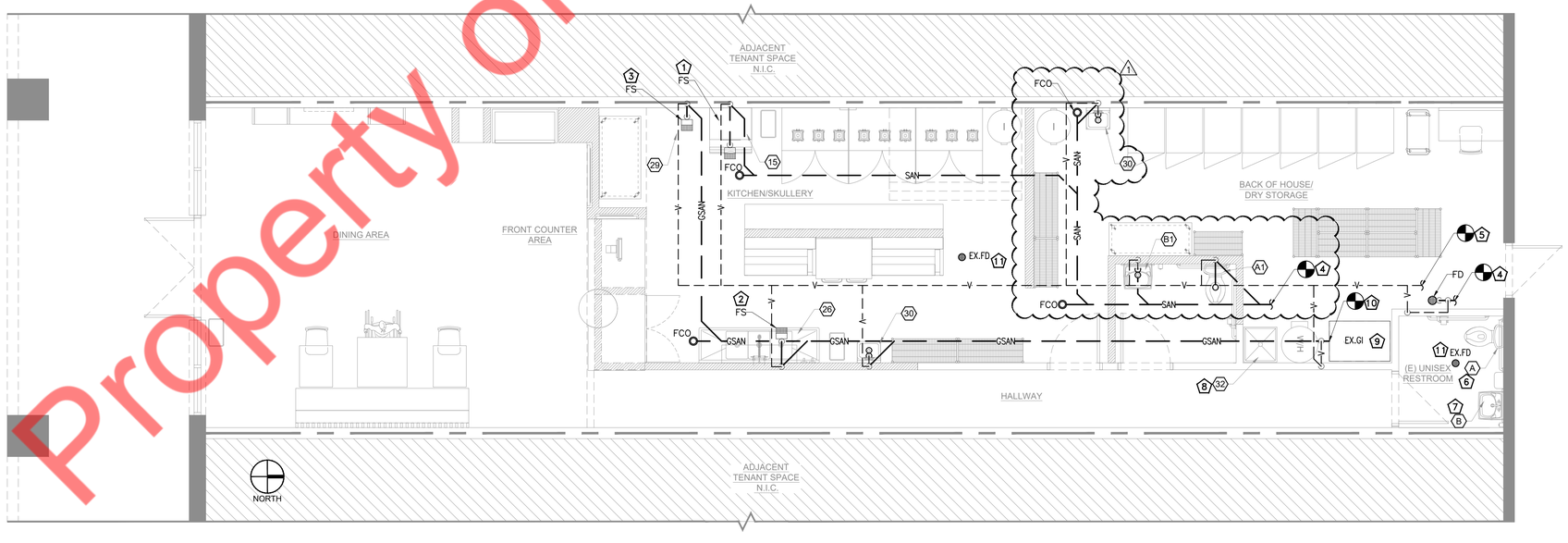
1. ROUTE INDIRECT WASTE FROM ICE MACHINE TO FLOOR SINK WITH APPROVED AIR GAP.
2. ROUTE INDIRECT WASTE FROM 3 COMPARTMENT SINK TO FLOOR SINK WITH APPROVED AIR GAP.
3. ROUTE INDIRECT WASTE FROM 1 COMPARTMENT SINK TO FLOOR SINK WITH APPROVED AIR GAP.
4. EXTEND & CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY LINE OF ADEQUATE SIZE IN AREA. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, ROUTING AND INVERT OF EXISTING SANITARY MAIN AND MAKE NECESSARY CHANGES IF REQUIRED.
5. CONNECT NEW 3" VENT PIPING TO EXISTING VENT LINE OF ADEQUATE SIZE IN AREA. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VENT LINE AND UPGRADE IF REQUIRED.
6. EXISTING WATER CLOSET TO REMAIN WITH EXISTING PIPING ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
7. EXISTING LAVATORY TO REMAIN WITH EXISTING PIPING ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
8. EXISTING MOP SINK TO REMAIN WITH EXISTING PIPING ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
9. EXISTING GREASE INTERCEPTOR (EX.GI) OF 100 GPM FLOW RATE & 200 LBS GREASE CAPACITY TO REMAIN & CONNECT TO NEW GREASE LINE. EXISTING OUTLET CONNECTION TO REMAIN AS IT IS. CONTRACTOR TO FIELD VERIFY THE CONDITIONS & CAPACITY OF EXISTING GREASE INTERCEPTOR & LET THE ENGINEER KNOW IF THERE IS ANY DISCREPANCY IN DRAWINGS & SITE CONNECTIONS OF GREASE INTERCEPTOR.
10. EXTEND & CONNECT NEW 4" GREASE SANITARY WASTE PIPING TO EXISTING GREASE INTERCEPTOR. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND INVERT OF EXISTING GREASE INTERCEPTOR AND CONNECT NEW LINE WITH NECESSARY ACCESSORIES.
11. EXISTING FLOOR DRAIN TO REMAIN WITH EXISTING PIPING ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.

GENERAL NOTES

1. SLOPE OF DRAINAGE PIPING SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" AND 1/4" PER FOOT OF RUN 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.



SANITARY RISER | SCALE N.T.S. | 2



SANITARY PLAN | SCALE 1/4" = 1'-0" | 1

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SANITARY PLAN & RISER

P-2

EXISTING STORAGE WATER HEATER SCHEDULE	
MANUFACTURER	AO SMITH
MODEL	LTE-80D 200
EQUIPMENT TAG	WH-E
STATUS	EXISTING
FUEL	ELECTRIC
CAPACITY	80 GALLONS
QUANTITY	1
POWER	4500 W
RECOVERY	20 GPH*
VENT	3"
VOLTAGE	208/1/60
AMPERAGE	21.63 AMP
WEIGHT	175 LBS

NOTES:

1. *OPERATION @ 90°F TEMPERATURE RISE.
2. EXISTING EXPANSION TANK (EX.ET) TO REMAIN.
3. CONTRACTOR TO CHECK THE CONDITION & CAPACITY OF EXISTING WATER HEATER AND EXPANSION TANK AND LET THE ENGINEER KNOW IF IT IS NOT IN OPERATIONAL CONDITION. ALSO FIELD VERIFY ELECTRICAL POWER REQUIREMENT AND COORDIANTE WITH ELECTRICAL CONTRACTOR BEFORE COMMENCING THE BID.

RECIRCULATION PUMP SCHEDULE	
MANUFACTURER & MODEL	GRUNDFOS UP 15-18 BS
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

1

POINT OF USE WATER HEATER SCHEDULE	
MANUFACTURER	EEMAX
MODEL	SPEX4208T
EQUIPMENT TAG	WH-1
STATUS	NEW
FUEL	ELECTRIC
CAPACITY	TANKLESS
QUANTITY	1
POWER	4100 W
RECOVERY	0.5 GPM*
VOLTAGE	208/1/60
AMPERAGE	20 AMP
WEIGHT	4 LBS

NOTES:

1. *OPERATION @ 56°F TEMPERATURE RISE.
2. CONTRACTOR TO PROVIDE NECESSARY CASING WITH THE HEATER AS PER ARCHITECTURE/OWNER INSTRUCTIONS.

GENERAL NOTES

1. CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2012 KENTUCKY ENERGY CODE (REFER NOTES ON SHEET P-1).
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.

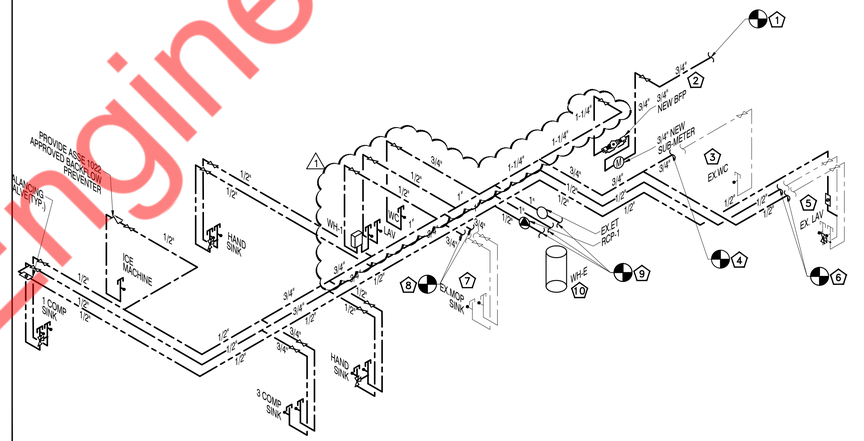
WATER & GAS KEY NOTE

1. CONNECT NEW 3/4" CW LINE TO EXISTING 3/4" WATER MAIN LINE IN SPACE. PROVIDE NEW SHUT OFF VALVE IN NEW CW LINE AT THE POINT OF CONNECTION. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND MINIMUM AVAILABLE PRESSURE OF EXISTING CW PIPING AND UPGRADE LINE IF PRESSURE IS LESS THAN 60 PSI.
2. NO TAP OFF TO BE TAKEN BEFORE BFP.
3. EXISTING WATER CLOSET TO REMAIN WITH EXISTING CW PIPING CONNECTIONS WITH ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
4. EXTEND TO CONNECT NEW 3/4" CW PIPING TO EXISTING CW PIPING FOR THE EXISTING WATER CLOSET CONNECTION.
5. EXISTING LAVATORY & FAUCET TO REMAIN WITH EXISTING CW/HW PIPING CONNECTIONS WITH ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
6. EXTEND TO CONNECT NEW 1/2" CW/HW PIPING TO EXISTING CW/HW PIPING FOR THE EXISTING LAVATORY FAUCET CONNECTION.
7. EXISTING MOP SINK & FAUCET TO REMAIN WITH EXISTING CW/HW PIPING CONNECTIONS WITH ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
8. EXTEND TO CONNECT NEW 3/4" CW/HW PIPING TO EXISTING CW/HW PIPING FOR THE EXISTING MOP SINK FAUCET CONNECTION.
9. EXTEND AND CONNECT NEW 1" CW PIPING TO EXISTING WATER HEATER CONNECTION.
10. EXISTING WATER HEATER TO REMAIN WITH EXISTING EXPANSION TANK. CONTRACTOR TO FILED VERIFY THE CONDITION OF WATER HEATER ACCESSORIES & REPLACE IF REQUIRED.
11. EXISTING RTU TO REMAIN WITH EXISTING GAS LINE CONNECTIONS WITH ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXITING GAS LINE AND REPLACE IF REQUIRED.

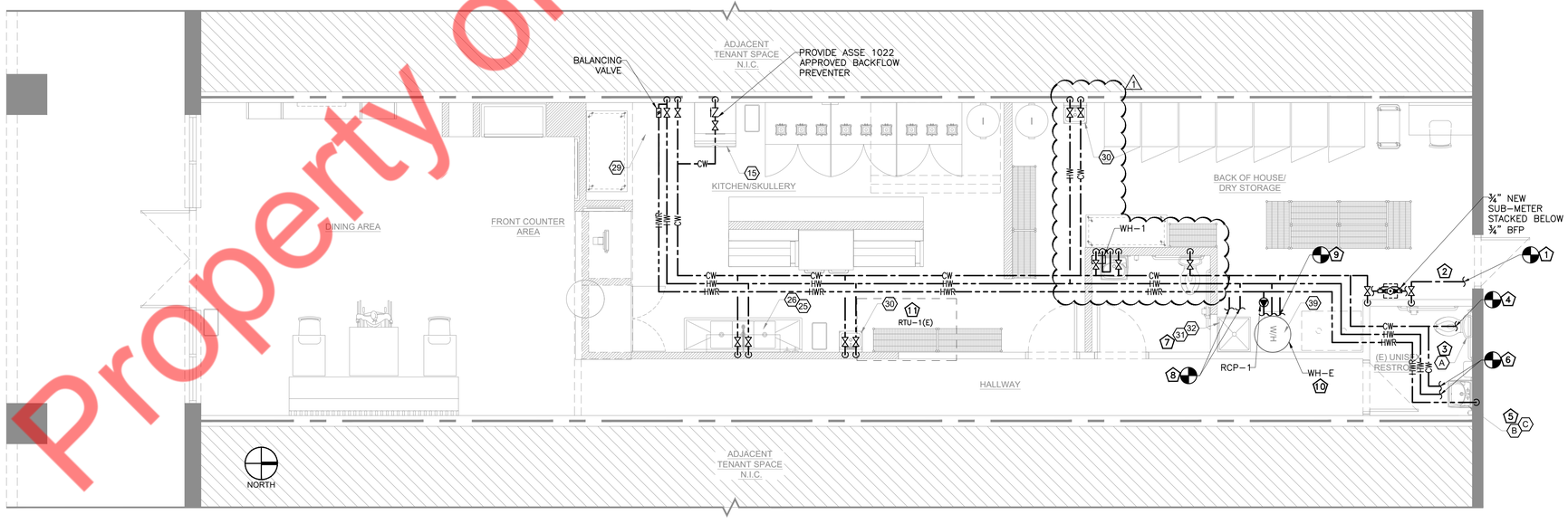
1

FIXTURE FACTOR VALUE	
1 WATER CLOSET (TANK)(E) @ 5.0	= 5.0
1 LAVATORY (E) @ 2	= 2.0
1 WATER CLOSET (TANK)(N) @ 5.0	= 5.0
1 LAVATORY (N) @ 2	= 2.0
2 HAND SINK @ 0.7	= 1.4
1 1-COMP SINK @ 1.4	= 1.4
1 3-COMP SINK @ 4.0	= 4.0
1 MOP SINK (E) @ 3.0	= 3.0
1 **MISC @ 0.25	= 0.25
TOTAL	= 24.05

** ICE MACHINE
3/4" WATER METER AND 1-1/4"
WATER DISTRIBUTION SIZE REQUIRED.



WATER RISER | SCALE N.T.S. | 2



WATER & GAS PLAN | SCALE 1/4" = 1'-0" | 1

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WATER PLAN, WATER RISER & GAS PLAN

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