SCOPE OF WORK

REUSE EXISTING TWO 3.0 TON GAS HEAT ROOFTOP UNIT AND PROVIDE ONE NEW 2.0 TON HEAT PUMP SPLIT SYSTEM. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. REUSE THE EXISTING DUCTWORK AND DIFFUSERS WHEREVER POSSIBLE IF IN GOOD OPERABLE CONDITIONS.

PROVIDE ONE NEW RESTROOM EXHAUST FANS & 1 NEW OTHER EXHAUST FAN AS SHOWN IN PLAN.

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

MECHANICAL PLAN NOTES

A. REUSE EXISTING TWO 3.0 TON GAS HEAT ROOFTOP UNIT AND PROVIDE ONE NEW 2.0 TON HEAT PUMP SPLIT SYSTEM. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. REUSE THE EXISTING DUCTWORK AND DIFFUSERS WHEREVER POSSIBLE IF IN GOOD OPERABLE CONDITIONS. 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.

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 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.

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. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE LOCATION OF THERMOSTAT.

E. 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.

F. ALL INTERIOR AIR DUCT WITH INSULATION SHALL HAVE MINIMUM OF THICKNESS OF 1.5" R-8 INSULATION. EXTERIOR AIR DUCT TO HAVE R-8 INSULATION ACCORDING TO - 2022 CECC.

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 EVAPORATOR UNITS SHALL HAVE A FLOAT SWITCH TO CONTROL OVERFLOW THAT WILL AUTOMATICALLY SHUT DOWN THE RTU SYSTEM. THE DEVICE SHALL BE ATTACHED TO THE SECONDARY DRAIN OUTLET ON THE UNIT.

I. ALL HVAC CONDENSATE DRAINS WILL BE PVC FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST APPROVED PLACE OF DISPOSAL.

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

K. TESTING AND BALANCING SHALL BE DONE 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.

L. 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.

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

TURLOCK, CA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF CURRENT CA BUILDING CODES AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
2. VENTILATION FOR ALL AREA SHALL COMPLY WITH - 2022 CEC -120.1
3. 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.
4. SMOKE DETECTOR SHALL MEET UL268A.
5. TEST OF MECHANICAL SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTION OF THE - 2022 CMC:
   A. VENTILATION SYSTEM BALANCING - 2022 CMC -407.3
6. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. STANDARD OF HEATING - 2022 CMC -1203
   B. DUCT CONSTRUCTION AND INSTALLATION - 2022 CMC -603
   C. AIR INTAKES, EXHAUSTS AND RELIEF - 2022 CMC -502
   D. AIR FILTER - 2022 CMC -401
   E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROL FOR AIR DISTRIBUTION SYSTEM - 2022 CMC -606
7. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
8. 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
9. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
10. 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 BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
11. VENTILATION SYSTEM SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THE SYSTEM SHALL BE BALANCED BY APPROVED METHOD - CONTRACTOR TO SUBMIT THE AIR-BALANCE REPORT TO INSPECTOR.

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 PIPING OR EQUIPMENT WHICH IS NOT EXPOSED.
4. OUTDOOR: 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
105 — 140	0.22 — 0.28	100	1.0	1.5	1.5	1.5	1.5
40 — 60	0.21 — 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 — 0.26	50	1.0	1.5	1.5	1.5	1.5

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. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.

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. 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 AND EXPOSED DUCTWORK WITH INTERNAL INSULATION.

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

K. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

L. 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.

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

HEAT PUMP SPLIT SYSTEM SCHEDULE

AIR HANDLER DATA	UNIT TAG	AC-3(N)
	UNIT TYPE	HEAT PUMP
	AREA SERVED	REFER PLAN
	SUPPLY AIR (CFM)	800
	OUTSIDE AIR (CFM)	200
	STATIC PRESS. (E.S.P INCH OF W.C.)	0.5
	MANUFACTURER	CARRIER (OR EQUIVALENT)
	MODEL NO.	FX4DNF031L (OR EQUIVALENT)
	WEIGHT, LBS	155
	VOLTS/PH/HZ	208-230/1/60
	MCA (A)	5.1
	MOCP (A)	15.0
CONDENSING UNIT DATA	UNIT TAG	CU-3(N)
	AIR HANDLER SERVED	AC-3(N)
	CAPACITY	2.0 TR
	REFRIGERANT	R410A
	TOT. COOLING CAP. (MBH)	21.6
	COOLING SENS. CAP. (MBH)	17.2
	TOT. HEATING CAP. (MBH)	16.3
	COMPRESSOR RLA	11.1
	OUTDOOR FAN FLA	0.6
	VOLTS/PH/HZ	208-230/1/60
	M.C.A. / MAX. CKT. BRKR. AMPS	14.5 / 25
	MANUFACTURER	CARRIER (OR EQUIVALENT)
	MODEL	25SCA524A (OR EQUIVALENT)
	SEER	16.0
	HSPF	9.0
	WEIGHT, LBS	160

HEAT PUMP SPLIT SYSTEM NOTES:-

1. PROVIDE DISCONNECT SWITCH & NON-POWERED GFI OUTLET.
2. COORDINATE FINAL LOCATION OF INDOOR AND OUTDOOR UNIT WITH ARCHITECT/OWNER/LANDLORD.
3. SUPPLY AIR CFM BASED ON HIGH SPEED.
4. REFRIGERANT R410A SHALL BE PROVIDED.
5. PROVIDE ALL ASSOCIATED ACCESSORIES.
6. ALL REFRIGERANT PIPING TO BE SIZED PER MANUFACTURERS RECOMMENDATIONS.
7. CONTRACTOR SHALL PROVIDE A LONG LINE SET FOR REFRIGERANT PIPING IN THE EVENT THAT TOTAL REFRIGERANT LENGTH EXCEEDS THE MANUFACTURER'S STANDARD RECOMMENDED LENGTH. CONTRACTOR TO FIELD VERIFY THE EXACT TOTAL REFRIGERANT LENGTH AND COORDINATE WITH THE MANUFACTURER PRIOR ORDERING UNIT
8. PROVIDE DRAIN PAN WITH WATER LEAK DETECTOR.
9. VERIFY ALL DATA WITH MANUFACTURER PRIOR TO ORDERING EQUIPMENT.
10. PROVIDE CONDENSATE DRAIN PUMP IF REQUIRED. ROUTE CONDENSATE DRAIN FROM AC - 3(N) TO THE NEAREST APPROVED PLACE OF DISPOSAL. COORDINATE WITH PLUMBING CONTRACTOR.
11. CONDENSING UNIT TO BE SELECTED AT 105°F AMBIENT CONDITION.
12. PROVIDE ACCESS DOOR FOR THE INDOOR UNIT IN COORDINATION WITH ARCHITECT.

ROOF TOP UNIT SCHEDULE

UNIT TAG	AC-1(E)	AC-2(E)
UNIT TYPE	GAS HEAT	GAS HEAT
MANUFACTURER	TRANE (V.I.F)	TRANE (V.I.F)
MODEL	4YCC3036 (V.I.F)	4YCC3036 (V.I.F)
STATUS	EXISTING	EXISTING
LOCATION	ROOF	ROOF
TOTAL CAPACITY	3.0 TON (V.I.F)	3.0 TON (V.I.F)
TOTAL COOLING MBH	S.A.E	S.A.E
TOTAL SENSIBLE MBH	S.A.E	S.A.E
SEER	S.A.E	S.A.E
HEATING MBH (INPUT)	64.0 (V.I.F)	64.0 (V.I.F)
HEATING MBH (OUT.)	51.5 (V.I.F)	51.5 (V.I.F)
THERMAL EFF (%)	S.A.E	S.A.E
SUPPLY AIR (CFM)	1200	1200
OUTDOOR AIR (CFM)	325	115
VOLTAGE/PHASE/HZ	208-230/3/60 (V.I.F)	208-230/3/60 (V.I.F)
MCA (A)	17.2 (V.I.F)	17.2 (V.I.F)
MOCP (A)	25.0 (V.I.F)	25.0 (V.I.F)
ESP (IN. OF H2O)	S.A.E	S.A.E
WEIGHT (LBS)	S.A.E	S.A.E

NOTES FOR EXISTING RTU:

1. EXISTING RTU 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 ALL RTU ARE 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. CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.

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

FAN SCHEDULE

TAG	KEF-1(N)	EF-1(N)
STATUS	NEW	NEW
QUANTITY	1	1
MANUFACTURER	GREENHECK	GREENHECK
MODEL	SP-A710	SP-A125
CFM	450 @ 0.5 (ESP IN W.C.)	70 @ 0.3 (ESP IN W.C.)
AMPS	4.9	0.18
ACCESSORIES	BD	BD
WEIGHT (LBS)	45	20
VOLT / PH / HZ	115/1/60	115/1/60
NOTES	1,2,4.	1,2,3.

NOTES :
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE BACK DRAFT DAMPER.
3. INTERLOCK WITH AC-3(N).
4. INTERLOCK WITH AC-2(E).

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A1	A2	R	E
USE	SUPPLY	SUPPLY	RETURN	SUPPLY/ RETURN
MODEL	TDC-AA	300 FS	FL 15	S.A.E
MOUNTING	CEILING	DUCT	WALL	S.A.E
LOCATION	AS SHOWN	AS SHOWN	AS SHOWN	S.A.E
FACE SIZE	24" X 24"	AS SHOWN	AS SHOWN	S.A.E
NECK SIZE	REFER TABLE - A	-	-	S.A.E
FRAME TYPE	LAY IN/ FLANGED	FLANGED	FLANGED	S.A.E
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

NOTES :
1. MAX. NC LEVEL 30 OR LESS.
2. PROVIDE SQUARE TO ROUND NECK ADAPTOR.
3. COORDINATE WITH ARCHITECT FOR PAINT AND FINISH.
4. PROVIDE 4-WAY AIR THROW PATTERN UNLESS NOTED OR INDICATED.
5. PROVIDE INSULATED BACKS ON ALL DIFFUSERS.
6. S.A.E : SAME AS EXISITNG

VENTILATION REQUIREMENTS PER AS PER CALIFORNIA ENERGY CODE 2022 - TABLE 120.1-A & B

PREP KITCHEN	638 SQ. FT. X 0.15 CFM/SQ. FT. =	96 CFM
OFFICE	89 SQ. FT. X 0.15 CFM/SQ. FT. =	14 CFM
SALES	100 SQ. FT. X 0.25 CFM/SQ. FT. =	25 CFM
PRIVATE DINING	191 SQ. FT. X 0.5 CFM/SQ. FT. =	96 CFM
DINING	786 SQ. FT. X 0.5 CFM/SQ. FT. =	393 CFM
OUTSIDE AIR REQUIRED		624 CFM
SINGLE USER ACC. RR	70 CFM PER FIXTURE	70 CFM
PREP KITCHEN	638 SQ. FT. X 0.7 CFM/SQ. FT. =	447 CFM
EXHAUST AIR REQUIRED		517 CFM
OUTSIDE AIR THROUGH AC-1(E)		325 CFM
OUTSIDE AIR THROUGH AC-2(E)		115 CFM
OUTSIDE AIR THROUGH AC-3(N)		200 CFM
AIR BALANCE		
O/A PROVIDED		+640 CFM
EF-1(N)		-70 CFM
KEF-1(N)		-450 CFM
BUILDING PRESSURE (BAROMETRIC RELIEF)		+120 CFM

NOTES-
1. CONTRACTOR TO ADJUST MOTORIZED/MANUAL DAMPER ON FRESH AIR TAP TO PROVIDE OUTSIDE AIR AS MENTIONED IN ABOVE TABLE.

NECK SIZE TABLE - A

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

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
- REMOTE SENSOR
- MANUAL VOLUME DAMPER
- TEMPERATURE SENSOR
- FLEXIBLE DUCTWORK R-6.0
- Ø ROUND DUCT DIAMETER
- CFM CUBIC FEET/ MINUTE
- ROOF MOUNTED EXHAUST FAN OUTLET
- S/A SUPPLY AIR
- R/A RETURN AIR
- ROOFTOP UNIT
- SG SUPPLY GRILLE
- MOTORIZED DAMPER
- CD CONDENSATE PIPING
- BD BACK DRAFT DAMPER
- GC 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.

THERMOSTATIC NOTES

A. 120.2 (a) THERMOSTATIC CONTROLS FOR EACH ZONE. THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH SPACE-CONDITIONING ZONE OR DWELLING UNIT SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE AND THAT MEETS THE APPLICABLE REQUIREMENTS OF SECTION 120.2(b). AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ONE OR MORE THERMOSTATIC CONTROLS IF IT COMPLIES WITH ALL APPLICABLE REQUIREMENTS FOR EACH THERMOSTATIC CONTROL.

EXCEPTION TO SECTION 120.2(a): AN INDEPENDENT PERIMETER HEATING OR COOLING SYSTEM MAY SERVE MORE THAN ONE ZONE WITHOUT INDIVIDUAL THERMOSTATIC CONTROLS IF:

1.ALL ZONES ARE ALSO SERVED BY AN INTERIOR COOLING SYSTEM; AND

2.THE PERIMETER SYSTEM IS DESIGNED SOLELY TO OFFSET ENVELOPE HEAT LOSSES OR GAINS; AND

3.THE PERIMETER SYSTEM HAS AT LEAST ONE THERMOSTATIC CONTROL FOR EACH BUILDING ORIENTATION OF 50FEET OR MORE; AND

4.THE PERIMETER SYSTEM IS CONTROLLED BY AT LEAST ONE THERMOSTAT LOCATED IN ONE OF THE ZONES SERVED BY THE SYSTEM.

B. 120. 2(d) HEAT PUMP CONTROLS. ALL HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL BE INSTALLED WITH CONTROLS THAT COMPLY WITH SECTION 110.2(b).

C. 120.2 (e) SHUT-OFF AND RESET CONTROLS FOR SPACE-CONDITIONING SYSTEMS. EACH SPACE-CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT COMPLY WITH THE FOLLOWING:

1. THE CONTROL SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NON-USE AND SHALL HAVE:
   a. AN AUTOMATIC TIME SWITCH CONTROL DEVICE COMPLYING WITH SECTION 110.9(c), WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE
   b. SYSTEM FOR UP TO 4 HOURS; OR
   c. AN OCCUPANCY SENSOR; OR
   d. 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED.

   EXCEPTION TO SECTION 120.2(e)1: MECHANICAL SYSTEMS SERVING RETAIL STORES AND ASSOCIATED MALLS, RESTAURANTS, GROCERY STORES, CHURCHES AND THEATERS EQUIPPED WITH 7-DAY PROGRAMMABLE TIMERS.
2. THE CONTROL SHALL AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN:
   a. A SETBACK HEATING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL HEATING ;AND

   EXCEPTION TO SECTION 120.2(e)2A: THERMOSTAT SETBACK CONTROLS ARE NOT REQUIRED IN NONRESIDENTIAL BUILDINGS IN AREAS WHERE THE WINTER MEDIAN OF EXTREMES OUTDOOR AIR TEMPERATURE DETERMINED IN ACCORDANCE WITH SECTION 140.4(b)3 IS GREATER THAN 32°F.

   b. A SETUP COOLING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL COOLING.

   EXCEPTION TO SECTION 120.2(e)2B: THERMOSTAT SETUP CONTROLS ARE NOT REQUIRED IN NON-RESIDENTIAL BUILDINGS IN AREAS WHERE THE SUMMER DESIGN DRY BULB 0.5 PERCENT TEMPERATURE DETERMINED IN ACCORDANCE WITH SECTION 140.4(b)3 IS LESS THAN 100°F.

D. 120.2 (f) DAMPERS FOR AIR SUPPLY AND EXHAUST EQUIPMENT. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.

EXCEPTION 1 TO SECTION 120.2(f): EQUIPMENT THAT SERVES AN AREA THAT MUST OPERATE CONTINUOUSLY.

EXCEPTION 2 TO SECTION 120.2(f): GRAVITY AND OTHER NON-ELECTRICAL EQUIPMENT THAT HAS READILY ACCESSIBLE MANUAL DAMPER CONTROLS.

EXCEPTION 3 TO SECTION 120.2(f): AT COMBUSTION AIR INTAKES AND SHAFT VENTS.

EXCEPTION 4 TO SECTION 120.2(f): WHERE PROHIBITED BY OTHER PROVISIONS OF LAW.

NY ENGINEERS
VITALITY BOWLS

PROJECT

REVISIONS DATES:

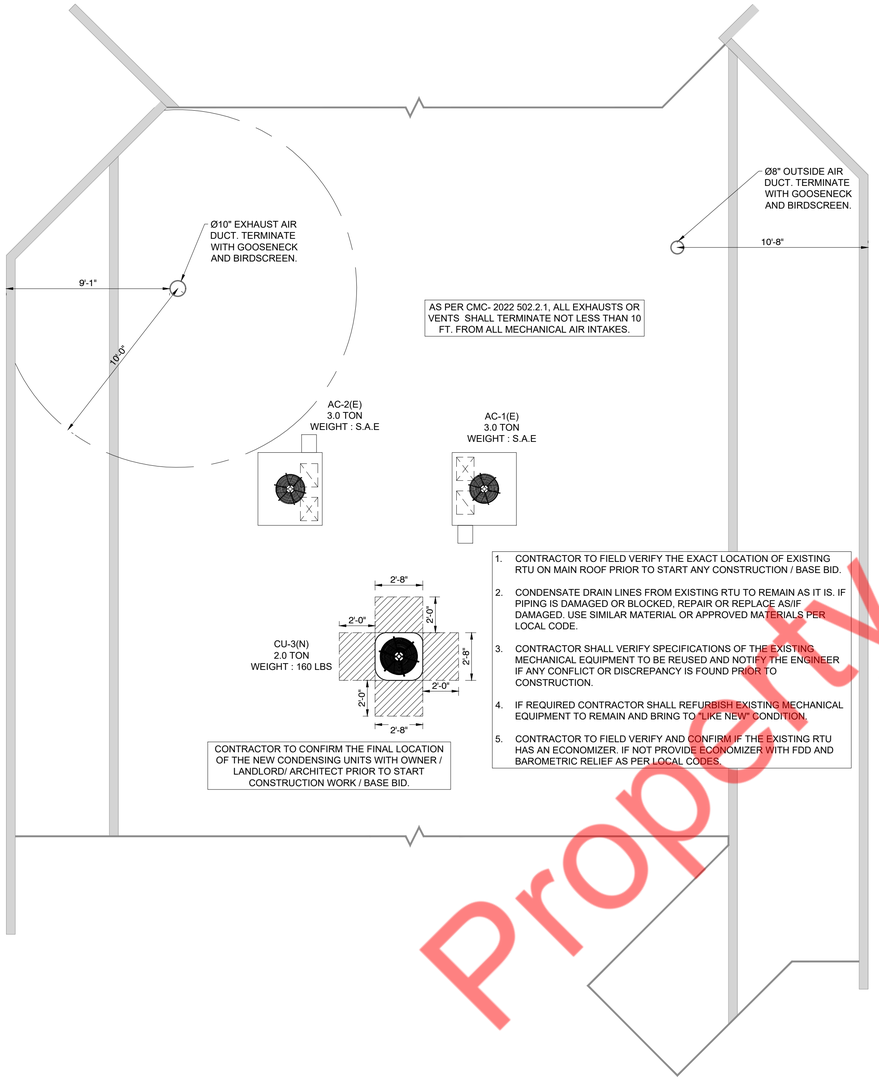
1	CITY CMNTS.	10/18/2024
2	HEALTH CMNTS.	10/23/2024

PROFESSIONAL SEAL

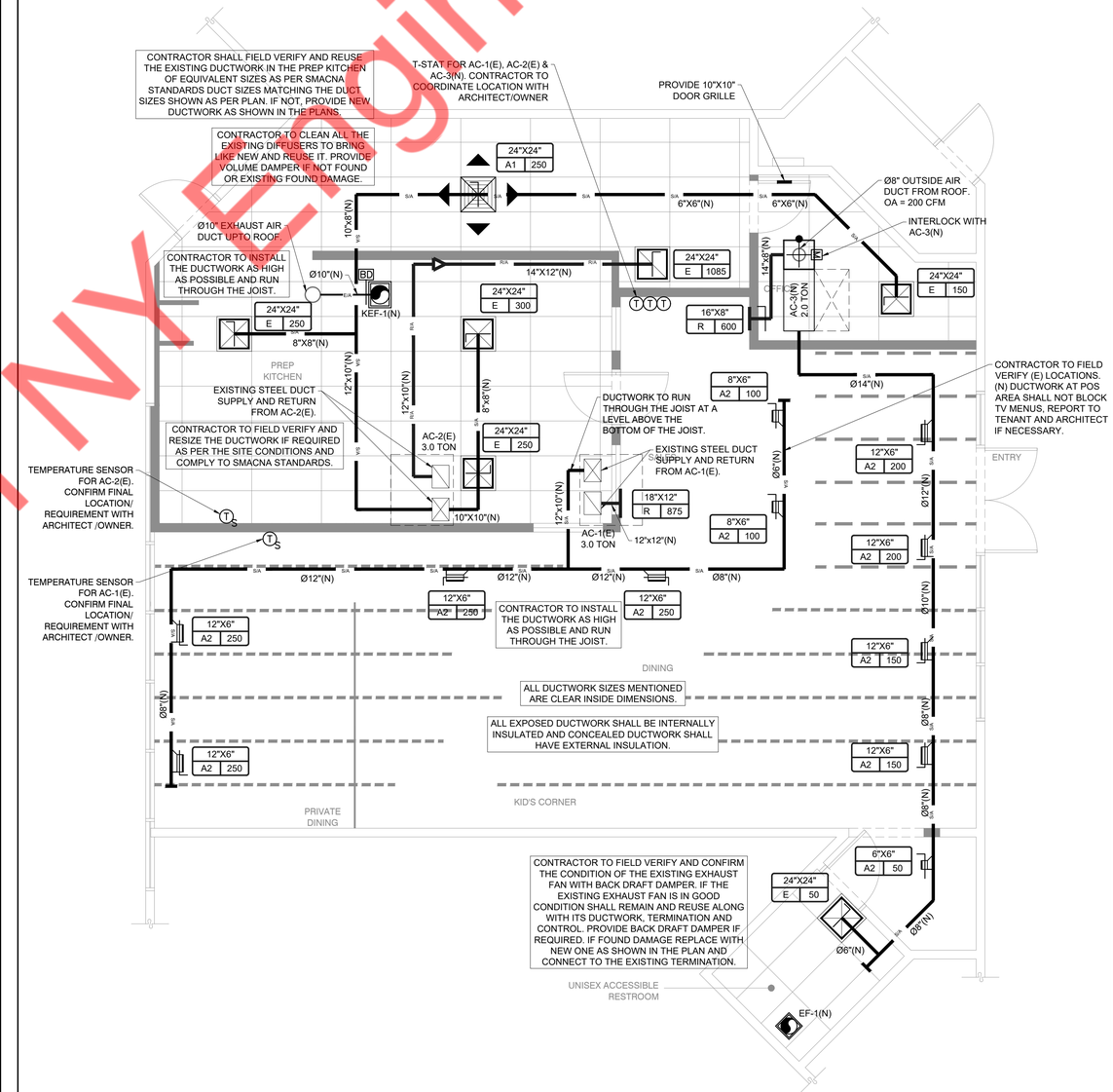
ISSUE DATE: 09-05-24
PROJECT #:
DRAWN BY: NYE
CHECKED BY: NYE

HVAC NOTES & SCHEDULES

M-1



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



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

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1	CITY CMNTS.	10/18/2024
2	HEALTH CMNTS.	10/23/2024

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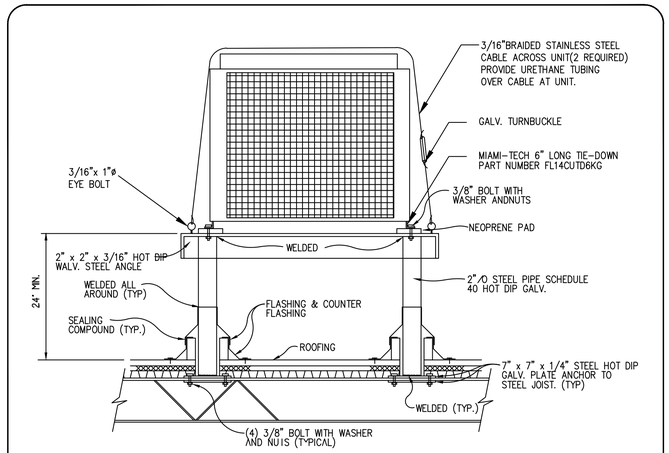
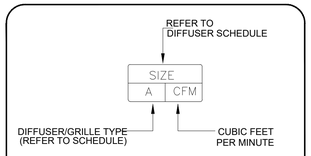
HVAC FLOOR & ROOF PLANS

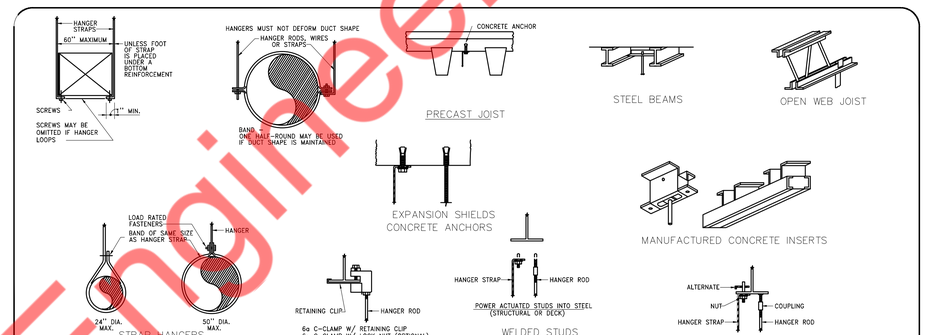
M-2



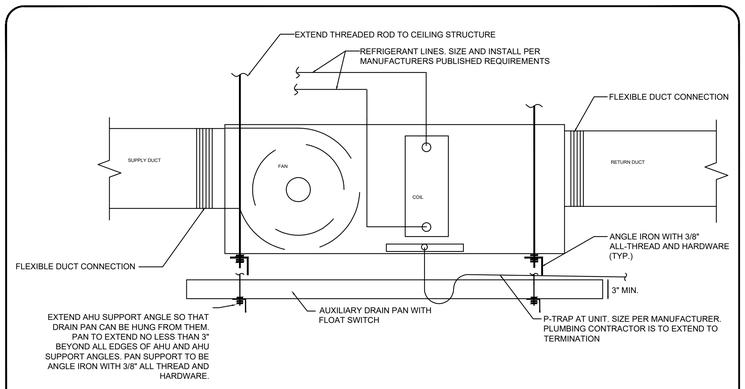
CONDENSING UNIT MOUNTING DETAILS
NOT TO SCALE



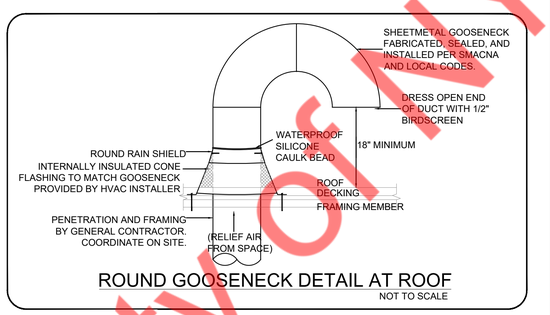
DIFFUSER/GRILLE TAG
NOT TO SCALE



UPPER & LOWER ATTACHMENTS & DEVICES
NOT TO SCALE

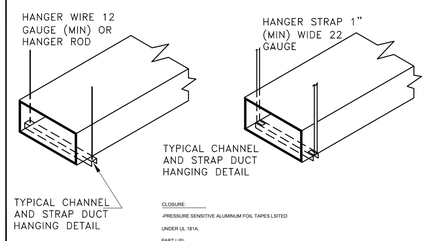


TYPICAL HORIZONTAL AIR HANDLER DETAIL
NOT TO SCALE

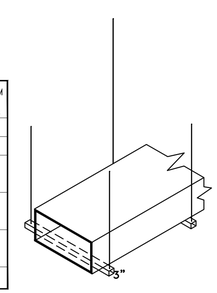


ROUND GOOSENECK DETAIL AT ROOF
NOT TO SCALE

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

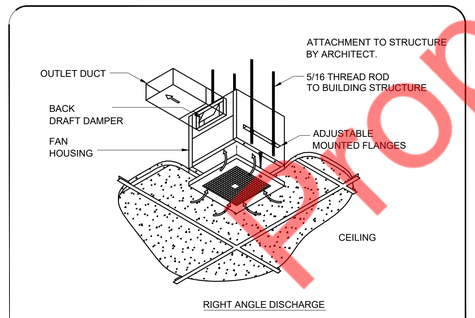


DUCT SIZE,IN.	MAXIMUM HANGER SPACING
① WIDTH 48" OR GREATER	4'-0"
② LESS THEN 48"W X 12"H	6'-0"
③ WIDTH BETWEEN 24" & 48" & HEIGHT OVER 24"	6'-0"
④ WIDTH BETWEEN 24" & 48" & HEIGHT BETWEEN 12" & 24"	8'-0"
⑤ WIDTH LESS THAN 24" & HEIGHT GREATER THAN 12"	8'-0"
DUCT REINFORCING PER SMACNA REQUIRED	

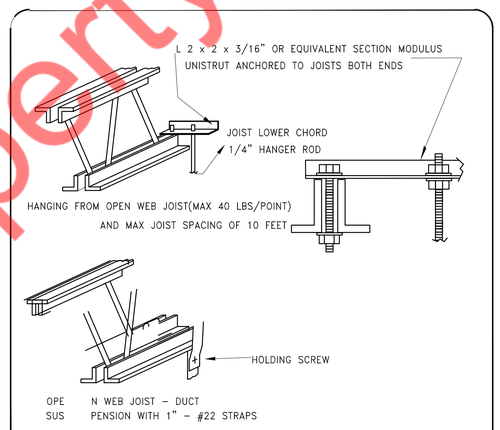


HANGER SPACING AND EXTENSION 3" WIDE CHANNELS

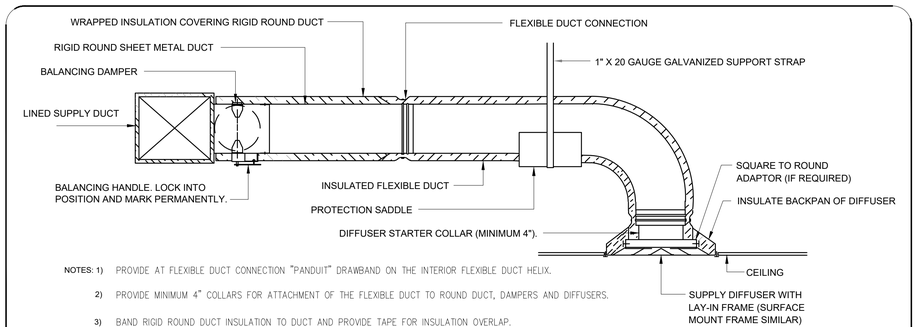
DUCT SUPPORTS
NOT TO SCALE



CEILING EXHAUST FAN DETAIL
NOT TO SCALE



DUCT MOUNTING DETAIL
NOT TO SCALE



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

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MECHANICAL DETAILS

M-3

SCOPE OF WORK

1. REUSE THE EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FEEDER FOR THE PROJECT SPACE.
2. REUSE THE EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL METER AND BREAKER SWITCH FOR THE PROJECT SPACE.
3. REUSE 200A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" (NAME TO VERIFY ON FIELD) FOR THE PROJECT SPACE.
4. PROVIDE NEW 100A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" FOR THE PROJECT SPACE.
5. PROVIDE ALL NECESSARY EQUIPMENT, WIRING AND LIGHTING FOR THE SPACE INCLUDING WIRING FOR VENTILATION EQUIPMENT. COORDINATE WITH G.C FOR LOW VOLTAGE WIRING.
6. ELECTRICAL CONTRACTOR TO COORDINATE WITH THE MECHANICAL AND PLUMBING CONTRACTOR FOR THE POWER REQUIREMENTS OF THE RESPECTIVE DEVICES/EQUIPMENT.

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 2020 EDITION OF THE NATIONAL ELECTRIC CODE 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 AND COMMUNICATIONS OUTLETS TO BE AT 24" 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 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. 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 BUIDING 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 WITH BOLT-ON TYPE CIRCUIT BREAKERS.
56. 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.
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/TENANT'S 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%.

GENERAL LIGHTING NOTES

A. WHERE LIGHT FIXTURE IS FOLLOWED BY "NL", THIS FIXTURE IS DESIGNATED AS A NIGHT LIGHT AND SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

B. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE AND LOWER CASE LETTER DENOTES SWITCHING SCHEME.

C. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
	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)
$OS	OCCUPANCY SENSOR WALL SWITCH
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
USB	DUPLEX RECEPTACLE WITH USB PROVISSION
	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS
	230 VOLT RECEPTACLE
	QUADRUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH DUPLEX RECEPTACLE
	FLOOR MOUNTED. FLUSH QUAD. RECEPTACLE
	FLOOR MOUNTED. FLUSH 230 VOLT RECEPTACLE
CL	CEILING MOUNTED DUPLEX RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
TV	TELEVISION OUTLET
	TELEPHONE OUTLET
	TELEPHONE/DATA OUTLET
	DATA OUTLET
	FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET
DATA	QUAD. DATA OUTLET RJ45
	DISCONNECT SWITCH

ABBREVIATIONS:

ABOVE FINISH FLOOR= A.F.F.
COUNTER TOP LEVEL= C
GROUND FAULT INTERRUPTER= GFCI
VERIFY PRIOR TO INSTALL= VH
WEATHER PROOF= WP
KITCHEN EXHAUST FAN = KEF
WATER HEATER= WH
AUTHORITY HAVING JURISDICTION= A.H.J.
ROOF TOP UNIT=R.T.U
BELOW COUNTER= BC
PUSH BUTTON= PB
UNDER CABINET= UC
VAPOR PROOF= VP
ELECTRICAL CONTRACTOR=E.C.
EXHAUST FAN=EF
RECIRCULATION PUMP=RCP

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	LAMP WATTAGE	QUANTITY	TOTAL WATTAGE	MOUNTING
	A	SUSPENDED PENDANT LIGHT	INTENSE LIGHTING	SS6G2C	120	13 WATTS	29	377 WATTS	SUSPENDED
	B	LARGE PENDANT CEILING LAMP	CAPITAL LIGHTING FIXTURE COMPANY	ARCHER 4-LIGHT PENDENT 344642WK 24" W x 14" H	120	15 WATTS (MAX)	4	60 WATTS (MAX)	SUSPENDED
	C	PENDANT LIGHTING	LITFAD	GLOBE PENDANT CELING LIGHT MACARON PURPLE #22232483	120	40 WATTS	8	320 WATTS	SUSPENDED
	D	2x4 LAY-IN LED LIGHT	WILLIAMS	50GS24-LEDUT35/840F AF 12125- DG- EQCLIPS- DIM- UNV	120	34 WATTS	14	476 WATTS	RECESSED
	E	RECESSED LED LIGHTING	ZUMTOBEL	BR4D-LED2N-22W-830-W5 -D1-CL-W-CA	120	22 WATTS	1	22 WATTS	RECESSED
	F	SUSPENDED PENDANT LIGHTING	FRANKLIN IRON WORKS	EMILE URBAN INDUSTRIAL 8-3 4" INDUSTRIAL MINI PENDENT LIGHT #7C289	120	7 WATTS	5	35 WATTS	SUSPENDED
EXIT	-	COMBO EXIT/EMERGENCY LIGHT	DUAL LITE	LT-U-RW-03L	120	3 WATTS	2	6 WATTS	WALL
$T	T	TIMER WALL SWITCH	LEVITON/EQUIVALENT	6124/EQUIVALENT	-	-			WALL
$OS	OS	OCCUPANCY WALL SWITCH	LEVITON	ODS10	-	-			WALL
OS	OS	CEILING OCCUPANCY SENSOR	LEVITON	ODC0S-I1W	-	-			CEILING
	(E)	EXISTING TO REMAIN	-	-	-	-			-

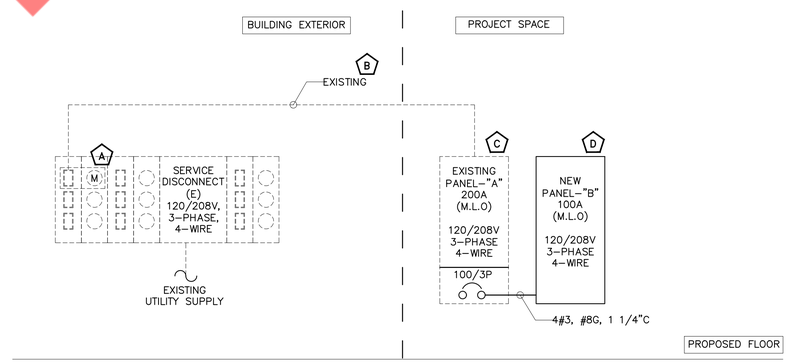
NOTE:
1. E.C. SHALL COORDINATE WITH ARCHITECT FOR FINAL FIXTURE COUNT AND TYPE.
2. COORDINATE EXACT CONTROL REQUIREMENTS WITH OWNER.
3. E.C SHALL PROVIDE REQUIRED POWER PACKS AND RELAYS SUITABLE FOR THE ABOVE LIGHT FIXTURES IN COORDINATION WITH THE LIGHTING VENDOR. BASE BID ACCORDINGLY.

LIGHT FIXTURE SCHEDULE NOTES:

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

(*) EXISTING FIXTURES ARE ACCEPTABLE, IF THEY NEED TO BE REPLACED, REPLACE W/ EXACT MATCH OR MATCH SCHEDULE

SUBSTITUTIONS TO THE ABOVE FIXTURE SCHEDULE MUST BE SUBMITTED 14 DAYS PRIOR TO BID & REVIEWED BY THE ARCHITECT, ENGINEER & OWNER. SUBSTITUTIONS WILL NOT BE REVIEWED AFTER THIS TIME. SUBMITTAL PACKAGES MUST INCLUDE COLOR, CUT SHEETS, ALL PHOTO METRICS & FIXTURE SAMPLES FOR ALL DECORATIVE FIXTURES, LANDSCAPE FIXTURES & OUTDOOR FIXTURES. WITHOUT THIS INFORMATION NO REVIEW WILL BE PROVIDED.



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 LANDLORD/BASE BUILDING FOR THE EXACT LOCATION OF THE EXISTING METER BANK AND EXACT POWER DISTRIBUTION IN THE FIELD. E.C SHALL VERIFY THE OPERABLE CONDITION OF EXISTING METER & BREAKER SWITCH, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

B. EXISTING FEEDERS TO REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF FEEDER'S IN FIELD AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

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

D. NEW 100A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". 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 NOTE:

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. POWER RISER DIAGRAM INDICATED FOR REFERENCE PURPOSES ONLY.

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

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ELECTRICAL PLAN NOTES AND RISER DIAGRAM

E-1

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. COORDINATE EXACT LOCATION OF TIMER SWITCH BANK WITH OWNER/ARCHITECT.

C. EXTERIOR SIGNAGE. E.C SHALL COORDINATE EXACT POWER REQUIREMENT, EXACT LOCATION & MOUNTING DETAILS WITH OWNER & SIGN VENDOR.

D. PROVIDE CEILING MOUNTED RECEPTACLE FOR SHOW WINDOW AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT.

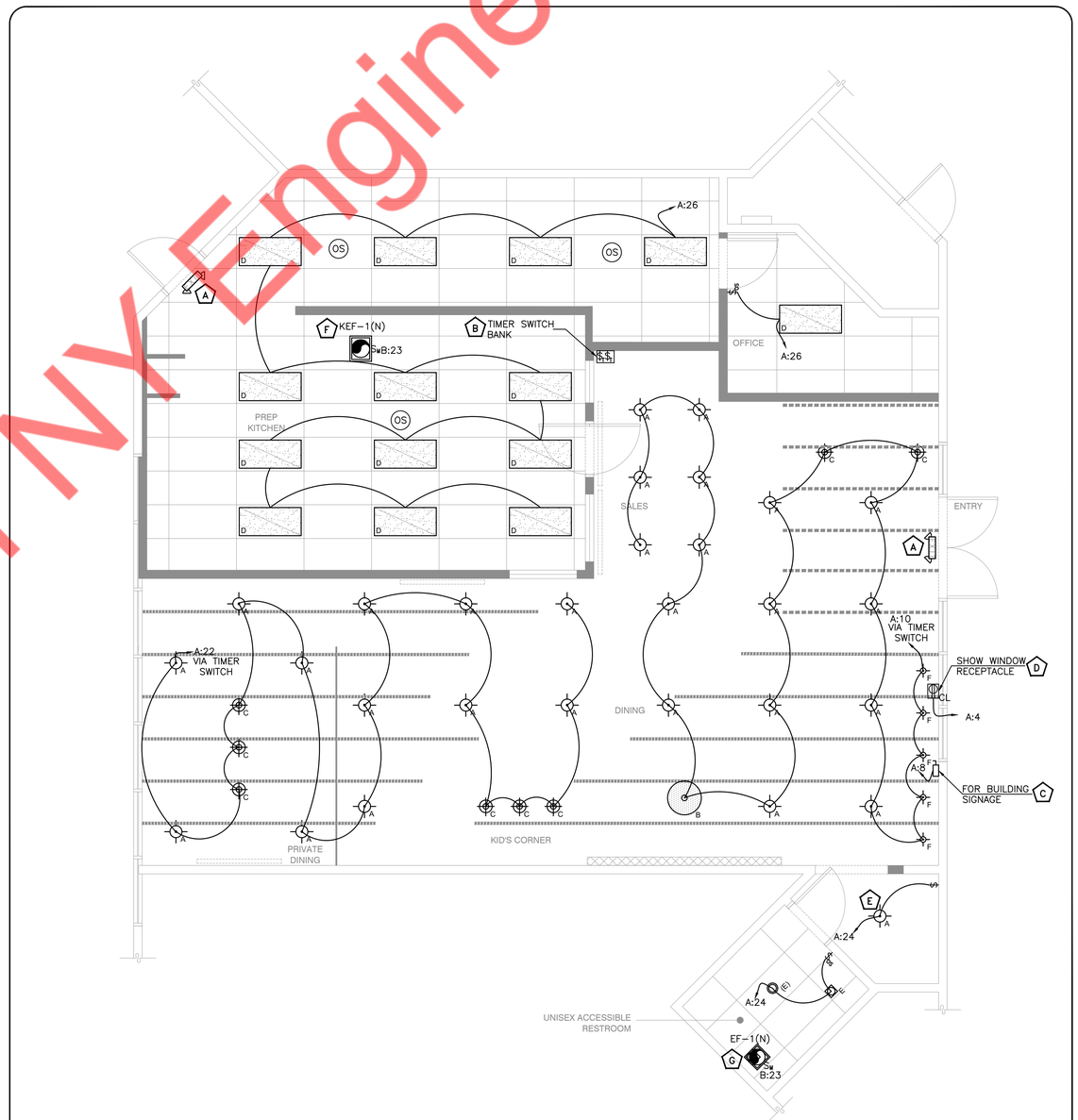
E. LIGHTING NEAR ELECTRICAL PANELS SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPLIED AS PER NEC 110.26(D).

F. EXHAUST FAN KEF-1(N) SHALL BE INTERLOCKED WITH AC-2(E). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE FINAL REQUIREMENT AND INTERCONNECTION WITH OWNER.

G. EXHAUST FAN EF-1(N) SHALL BE INTERLOCKED WITH AC-3(N). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS. COORDINATE FINAL REQUIREMENT AND INTERCONNECTION WITH OWNER.

ELECTRICAL LIGHTING PLAN GENERAL NOTES:

1. CONTRACTOR ADVISED TO UPDATE THE EMERGENCY LIGHT FIXTURES LOCATIONS/QUANTITY PER SITE REQUIREMENT UP ON FINAL INSPECTION OR PER LOCAL AHJ REQUIREMENT.



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

NY ENGINEERS

PROJECT

VITALITY BOWLS

REVISIONS DATES:		
1	CITY CMNTS.	10/18/2024
2	HEALTH CMNTS.	10/23/2024

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LIGHTING PLAN

E-2

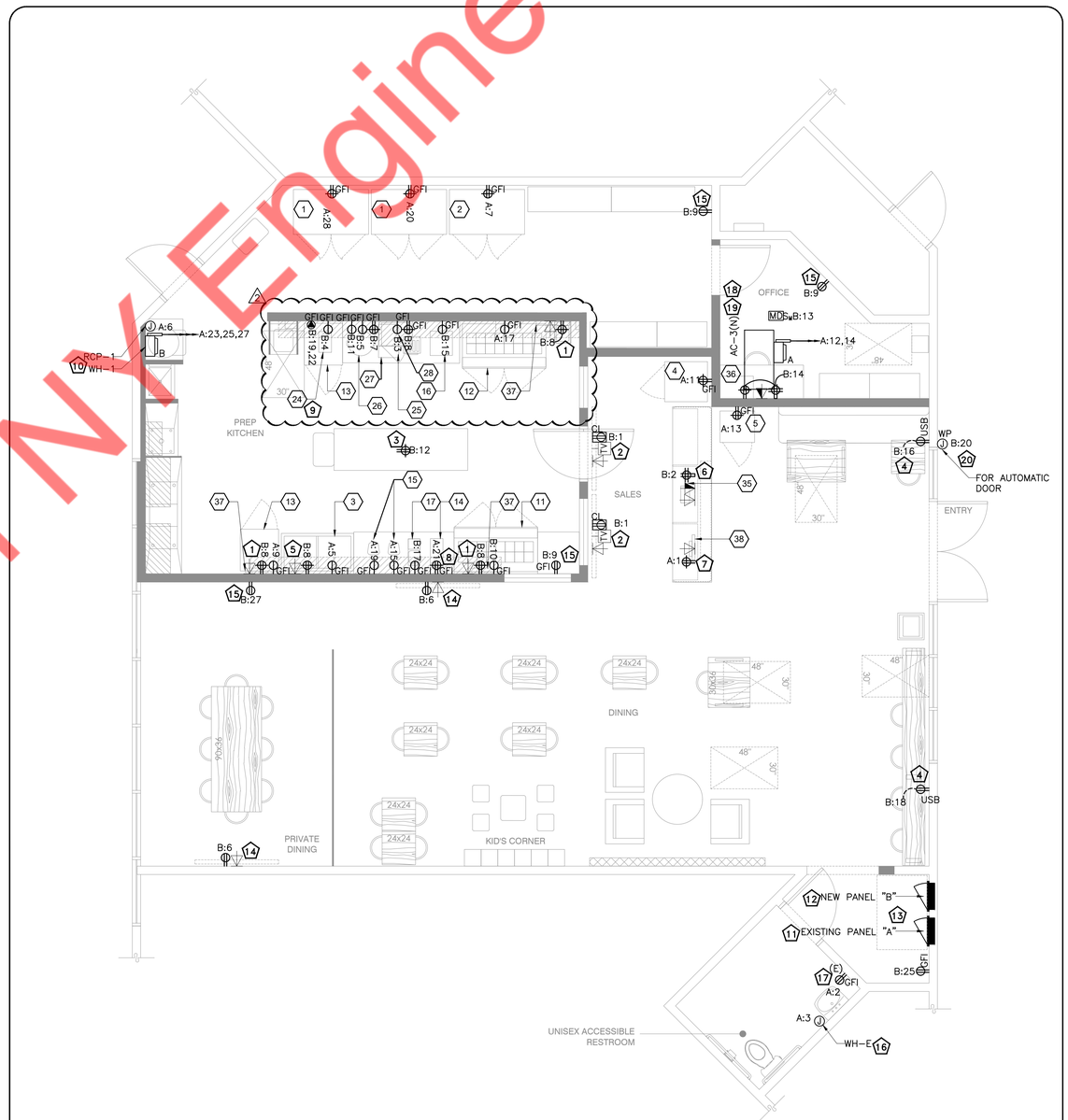
POWER PLAN GENERAL NOTES:

A. 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.

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

POWER PLAN KEYED NOTES:

1. PROVIDE NEW ORDER DISPLAY SCREEN WITH CAT 5 /6 DATA LINE FROM SCALE MODEM/ROUTER AND ELECTRICAL RECEPTACLE ABOVE TOPPING STATION (EQUIPMENT #11), SAVORY STATION (EQUIPMENT#12), BASING STATION (EQUIPMENT #13), COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATING, MOUNTING HEIGHT OF ELECTRICAL OUTLET.
2. PROVIDE (1) DUPLEX RECEPTACLE AND (1) CAT6 DATA CABLE AND CONNECTION FOR EACH MENUBOARD. COORDINATE IN FIELD FOR FINAL LOCATION AND EXACT MOUNTING HEIGHT WITH OWNER. REFER TO SHEET A1.1 NOTE 10.
3. PROVIDE A COMMERCIAL KITCHEN CORD REELS ABOVE TABLE.
4. ADD PLUG STRIP UNDER COUNTER TOP FACING CUSTOMER SEAT.(LEGRAND–TAMPER RESISTANT PLUGMOLD).
5. PROVIDE POS DATA AND PRINTER OUTLET ABOVE BASING REF @+66" A.F.F. REFER TO POS SYSTEM WIRING DIAGRAM IN EQUIPMENT BOOKLET. COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATING, MOUNTING HEIGHT OF ELECTRICAL OUTLET.
6. PROVIDE ALL POS SYSTEM LOW VOLTAGE AND STANDARD WIRING CONNECTIONS TO INVOICE PRINTER, PATCH PANEL, KITCHEN PRINTER, AND KITCHEN MONITOR (OPTIONAL), AND REFER WIRING DIAGRAM IN EQUIPMENT BOOKLET. REFER TO A1.1 SHEET NOTE "12".
7. PROVIDE A SELF ORDER KIOSK AND DATA LINE.
8. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH #14_RAPID RINSER EQUIPMENT MANUFACTURER/VENDOR FOR EXACT POWER REQUIREMENT, EXACT MOUNTING HEIGHT. BASE BID ACCORDINGLY.
9. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH #24_JUICER EQUIPMENT MANUFACTURER/VENDOR FOR EXACT POWER REQUIREMENT, EXACT MOUNTING HEIGHT. BASE BID ACCORDINGLY.
10. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF THE PLUMBING UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.
11. EXISTING 200A(M.L.O), 208/120V, 3–PHASE, 4–WIRE ELECTRICAL PANEL "A" (NAME TO BE VERIFIED AT FIELD). E.C SHALL VERIFY EXACT SIZE, LOCATION AND OPERABLE CONDITION OF PANEL. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
12. NEW 100A(M.L.O), 120/208V, 3–PHASE, 4–WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
13. E.C SHALL VERIFY THE INSTALLATION OF ELECTRICAL EQUIPMENTS ARE IN COMPLIANCE WITH N.E.C. 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.
14. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/VENDOR FOR EXACT POWER PROVISION, EXACT MOUNTING HEIGHT AND LOCATION OF ELECTRICAL OUTLET AND DATA PORT FOR WALL MOUNTED TV. BASE BID ACCORDINGLY.
15. DUPLEX OUTLET, COORDINATE MOUNTING HEIGHT WITH OWNER/ARCHITECT PRIOR TO ROUGH–IN.
16. EXISTING WATER HEATER (WH–E) ALONG WITH ITS ELECTRICAL CONNECTIONS SHALL REMAIN AND SHALL REMAIN CONNECTED TO THE EXISTING ELECTRICAL PANEL. VERIFY THE OPERABLE CONDITION OF EXISTING ELECTRICAL CONNECTION. REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
17. EXISTING RECEPTACLE ALONG WITH ITS ELECTRICAL CONNECTION SHALL REMAIN CONNECTED TO EXISTING PANEL "A" AS IT IS. E.C. SHALL VERIFY OPERABLE CONDITION OF EXISTING RECEPTACLE AND ITS CONNECTION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
18. 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.
19. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION OF THE MECHANICAL UNITS IN THE FIELD.
20. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AUTOMATIC DOOR MANUFACTURER/VENDOR FOR EXACT POWER REQUIREMENT, EXACT MOUNTING HEIGHT,LOCATION. BASE BID ACCORDINGLY.



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

NY ENGINEERS

PROJECT

VITALITY BOWLS

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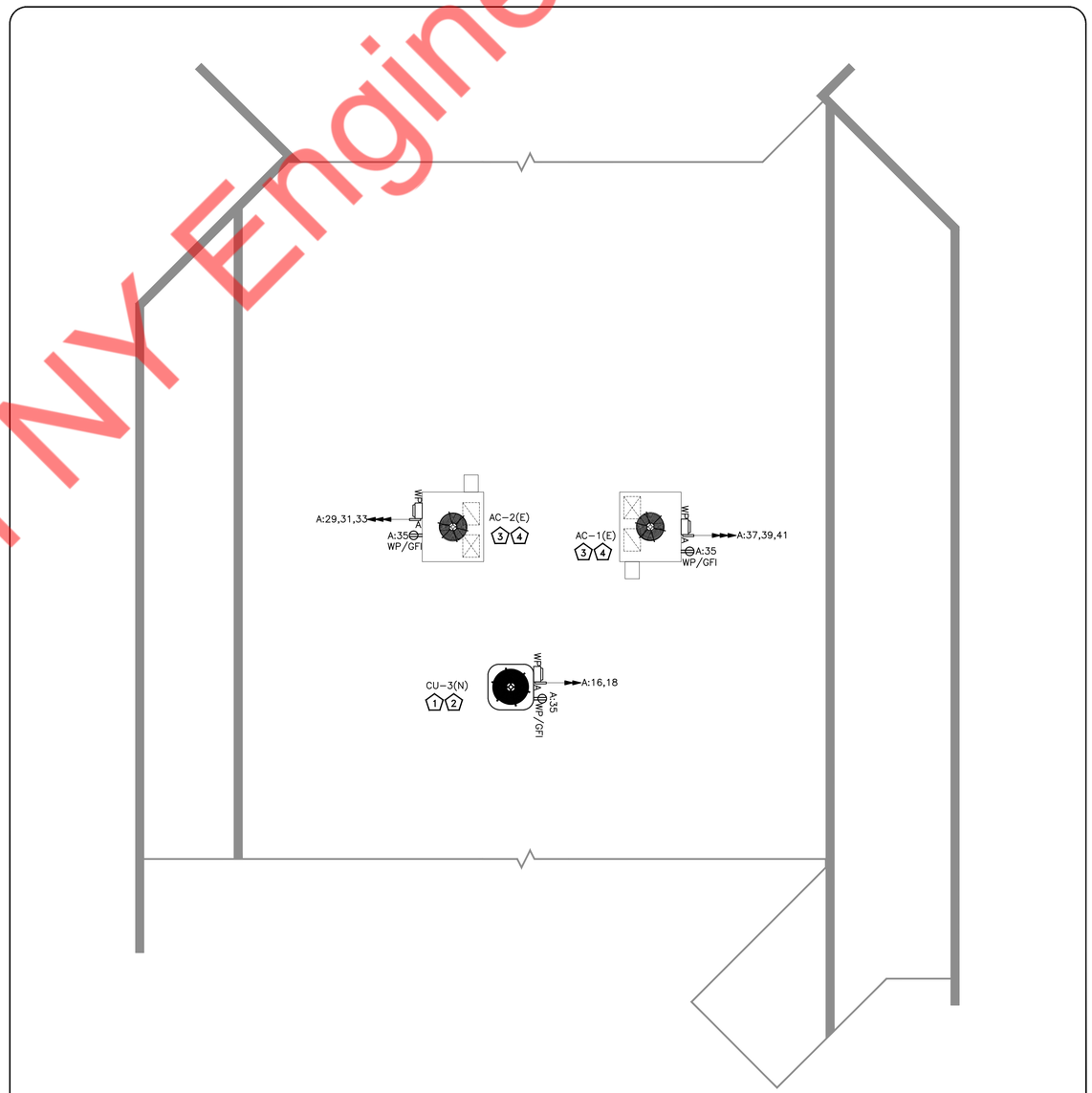
POWER & ROOF PLAN

E-3

ROOF PLAN KEYED NOTES:

1. 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.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION OF THE MECHANICAL UNITS IN THE FIELD.
3. EXISTING MECHANICAL UNIT SHALL REMAIN. E.C. TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ANY REQUIREMENT BASED ON THE FIELD CONDITION. E.C. SHALL GIVE POWER TO THE RTU'S FROM THE NEW ELECTRICAL PANEL.
4. EXISTING ROOF OUTLETS SHALL REMAIN. E.C. SHALL COORDINATE IN FIELD THE OPERABLE CONDITIONS OF THE SAME AND PROVIDE NEW IF FOUND INOPERABLE AS SHOWN ON THE DRAWINGS. BASE BID ACCORDINGLY.



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

NY ENGINEERS

PROJECT

VITALITY BOWLS

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ROOF PLAN

E-4

PANEL SCHEDULE:

6	PANEL:	A(E)													MOUNTING:	SURFACE			
	208Y/120	VOLTS,		3	PHASE,			4	WIRE						LOCATION:	CORRIDOOR			
	MAIN CB	NA.			MLO	200A			BUS	EXISTING		MIN,			FED FROM:	EXISTING METER/DISCONNECT			
	"NOTE: L:LIGHTING, R: RECEPTACLES, K:KITCHEN/EQUIPMENTS, H: HVAC, M: MOTOR, O:OTHER/MISCILLANEOUS "																		

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	POS RECEPTACLE	R	0.36	2#12, #12G, 3/4"C	0.54			EXISTING	0.18	R	RECEPTACLE RR	20	2
3	20	WATERHEATER	O	1.80	EXISTING		2.80		2#12, #12G, 3/4"C	1.00	R	SHOW WINDOW RECEPTACLE	20	4
5	20	#3_FLAT LID DISPLAY FREEZER	E	0.23	2#12, #12G, 3/4"C			1.08	2#12, #12G, 3/4"C	0.85	O	RCP-1	20	6
7	20	#2_STAND-UP 2-DOOR REFRIGERATOR	E	0.61	2#12, #12G, 3/4"C	1.61			2#12, #12G, 3/4"C	1.00	L	EXTERIOR SIGN	20	8
9	20	#13_UNDERCOUNTER REFRIGERATOR 1-DOOR	E	0.25	2#12, #12G, 3/4"C		0.64		2#12, #12G, 3/4"C	0.38	L	LIGHTING_SALES, DINNING	20	10
11	20	#4_STAND UP 1-DOOR FREEZER	E	0.56	2#12, #12G, 3/4"C			1.09	2#12, #12G, 3/4"C	0.53	H	AC-3(N) (4)	15-2P	12
13	20	#5_STAND UP 1-DOOR DRINK REFRIGERATOR	E	0.47	2#12, #12G, 3/4"C	1.00				0.53	H			14
15	20	#15_BLENDERS	E	1.80	2#12, #12G, 3/4"C		3.31		2#12, #10G, 3/4"C	1.51	H	CU-3(N) (3)	25-2P	16
17	20	#12_FOOD PREPARATION TABLE W/ 2-DOOR REF. TABLE	E	0.62	2#12, #12G, 3/4"C			2.13		1.51	H			18
19	20	#15_BLENDERS	E	1.80	2#12, #12G, 3/4"C	2.95			2#12, #12G, 3/4"C	1.15	E	#1_STAND-UP 2-DOOR FREZZER	20	20
21	20	#14_RAPID RINSER	E	0.49	2#12, #12G, 3/4"C		0.89		2#12, #12G, 3/4"C	0.40	L	LIGHTING_PRIVATE DINNING	20	22
23			O	4.08				4.12	2#12, #12G, 3/4"C	0.04	L	LIGHTING_RESTROOM	20	24
25	50-3P	WATER HEATER(WH-1) (1)	O	4.08	3#8, #10G, 3/4"C	4.56			2#12, #12G, 3/4"C	0.48	L	LIGHTING_PREP KITCHEN, OFFICE	20	26
27			O	4.08			5.23		2#12, #12G, 3/4"C	1.15	E	#1_STAND-UP 2-DOOR FREZZER	20	28
29			H	2.07				2.07				SPACE		30
31	30-3P	AC-2(E.)	H	2.07	3#10, #10G, 3/4"C	2.07						SPACE		32
33			H	2.07			2.07					SPACE		34
35	20	ROOF GFI	R	0.36	2#12, #12G, 3/4"C			0.36				SPACE		36
37			H	2.07		7.09				5.03	O			38
39	30-3P	AC-1(E.)	H	2.07	3#10, #10G, 3/4"C		7.09		4#3, #8G, 11/4"C	5.03	O	PANEL B (2)	100-3P	40
41			H	2.07				7.09		5.03	O			42
		TOTAL LOAD (KVA)				19.82	22.02	17.94						

6	PANEL:	B(N)													MOUNTING:	RECESSED			
	208Y/120	VOLTS,		3	PHASE,			4	WIRE						LOCATION:	CORRIDOOR			
	MAIN CB	NA.			MLO	100A			BUS	125A		MIN,			FED FROM:	PANEL A			
	"NOTE: L:LIGHTING, R: RECEPTACLES, K:KITCHEN/EQUIPMENTS, C: REFRIGERATION, H: HVAC, M: MOTOR, O:OTHER/MISCILLANEOUS "																		

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	TV MENU BOARD	R	0.70	2#12, #12G, 3/4"C	1.42			2#12, #12G, 3/4"C	0.72	R	POS	20	2
3	20	#25_4-SLICE COMMERCIAL TOASTER	E	1.80	2#12, #12G, 3/4"C		2.05		2#12, #12G, 3/4"C	0.25	E	#13_UNDERCOUNTER REFRIGERATOR 1-DOOR	20	4
5	20	#28_MICROWAVE	E	1.61	2#12, #12G, 3/4"C			2.11	2#12, #12G, 3/4"C	0.50	R	DINING AREA TV	20	6
7	20	#27_HEATED WELLS	E	1.44	2#12, #12G, 3/4"C	2.16			2#12, #12G, 3/4"C	0.72	R	PRINTER AND ORDER DISPLAY SCREEN	20	8
9	20	RECEPTACLE	R	0.36	2#12, #12G, 3/4"C		0.98		2#12, #12G, 3/4"C	0.62	E	#11_BOWL TOPPINGS 2-DOOR REF. TABLE	20	10
11	20	#26_RICE COOKER (OATMEAL)	E	1.55	2#12, #12G, 3/4"C			1.91	2#12, #12G, 3/4"C	0.36	R	KITCHEN CONVENIENCE RECEPTACLE	20	12
13	20	MOTORIZED DAMPER	M	0.10	2#12, #12G, 3/4"C	0.64			2#12, #12G, 3/4"C	0.54	R	#36_AUDIO VIDEO RACK	20	14
15	20	#16_PANINI PRESS	E	1.80	2#12, #12G, 3/4"C		2.88		2#12, #12G, 3/4"C	1.08	R	USB RECEPTACLE	20	16
17	20	#17_VITAMIX BLENDER	E	1.80	2#12, #12G, 3/4"C			2.88	2#12, #12G, 3/4"C	1.08	R	USB RECEPTACLE	20	18
19	20-2P	#24_JUICER	E	0.34	2#12, #12G, 3/4"C	0.84			2#12, #12G, 3/4"C	0.50	O	AUTOMATIC DOOR	20	20
21			E	0.34			0.34					SPARE	20	22
23	20	KEF-1, EF-1	H	0.55	2#12, #12G, 3/4"C			0.55				SPARE	20	24
25	20	SERVICE RECEPTACLE	R	0.18	2#12, #12G, 3/4"C	0.18						SPARE	20	26
27	20	PRIVATE DINING_RECEPTACLES	R	0.18	2#12, #12G, 3/4"C		0.18					SPACE		28
29		SPACE						0.00				SPACE		30
		TOTAL LOAD (KVA)				5.24	6.44	7.45						

PANEL SCHEDULE GENERAL NOTES:

A. ALL CIRCUITING SHOWN IN PANEL "A", FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY CIRCUITING & BREAKER SIZE 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. E.C. SHALL VERIFY THE EXISTING EQUIPMENT LOAD & RATINGS IN FIELD AND ACCORDINGLY CONSIDER THE ELECTRICAL LOAD IN PANEL BOARD SCHEDULE.
E. E.C. SHALL PROVIDE NEW CIRCUIT BREAKER IN PLACE OF EXISTING CIRCUIT BREAKER WHEREVER NECESSARY TO BE IN LINE WITH THE PANEL SCHEDULE. ALSO CHECK COMPATIBILITY OF NEWLY ADDED BREAKERS WITH EXISTING PANEL BEFORE PURCHASE

PANEL SCHEDULE KEY NOTES:

1. E. C SHALL PROVIDE (1)50AMP, 3 POLE BREAKER IN THE PLACE OF (3)SPACE.
2. E. C SHALL PROVIDE (1)100AMP, 3 POLE BREAKER IN THE PLACE OF (3)SPACE.
3. E. C SHALL PROVIDE (1)25AMP, 2 POLE BREAKER IN THE PLACE OF (2)SPACE.
4. E. C SHALL PROVIDE (1)15AMP, 2 POLE BREAKER IN THE PLACE OF (2)SPACE.
5. E. C SHALL PROVIDE (12)20AMP, 1 POLE BREAKER IN THE PLACE OF (12)SPACE.
6. PROVIDE GFCI PROTECTION FOR PERSONNEL FOR ALL SINGLE PHASE RECEPTACLES RATED 50AMP OR LESS & THREE PHASE RECEPTACLES RATED 100AMP OR LESS INSTALLED IN KITCHEN AREA PER NEC 210.8(B)2. GFI PROTECTION SHALL BE PROVIDED AT BREAKER WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE PER NEC 210.8 DUE TO STATIONARY KITCHEN EQUIPMENT.
7. E.C SHALL CROSS VERIFY THE EXACT BRANCH BREAKER FEEDING EXISTING CIRCUIT. ADJUST THE CIRCUIT NAMES/ BRANCH BREAKERS AS PER SITE CONDITION. BASE BID ACCORDINGLY.

KITCHEN EQUIPMENT SCHEDULE:

EQUIPMENT SCHEDULE						
ITEM NO.	DESCRIPTION	VOLTAGE	PHASE	AMPS	KVA	REMARK
1	STAND-UP 2-DOOR FREEZER	115	1	10.00	1.15	
2	STAND-UP 2-DOOR REFRIGERATOR	115	1	5.30	0.61	
3	FLAT LID DISPLAY FREEZER	115	1	2.00	0.23	
4	STAND UP 1-DOOR FREEZER	115	1	4.90	0.56	
5	STAND UP 1-DOOR DRINK REFRIGERATOR	115	1	4.10	0.47	
11	BOWL TOPPINGS 2-DOOR REF. TABLE	115	1	5.40	0.62	
12	FOOD PREPARATION TABLE W/ 2-DOOR REF. TABLE	115	1	5.40	0.62	
13	UNDERCOUNTER REFRIGERATOR 1-DOOR	115	1	2.20	0.25	
14	RAPID RINSER	120	1	4.10	0.49	VERIFY WITH VENDOR
15	BLENDERS	120	1	15.00	1.80	
16	PANINI PRESS	120	1	15.00	1.80	
17	VITAMIX BLENDER	120	1	15.00	1.80	
24	JUICER	220*	1	3.30	0.73	VERIFY WITH VENDOR
25	4-SLICE COMMERCIAL TOASTER	120	1	15.00	1.80	
26	RICE COOKER (OATMEAL)	120	1	12.90	1.55	
27	HEATED WELLS	120	1	12.00	1.44	
28	MICROWAVE	120	1	13.40	1.61	

NY ENGINEERS

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PANEL SCHEDULES

E-5

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, 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 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 SCH40 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 2022 CALIFORNIA PLUMBING CODE.
29. WATER HAMMER ARRESTORS AS PER 2022 CALIFORNIA 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.
34. CONTRACTOR TO PROVIDE NEW FLOOR DRAIN WITH TRAP PRIMER AS PER 2022 CALIFORNIA PLUMBING CODE.

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 AND ETC.

SCOPE OF WORK

PROVIDE PLUMBING FOR A SUPER FOOD CAFE INCLUDING WATER, SANITARY LINES, VENT, GAS AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW ELECTRIC STORAGE TYPE WATER HEATER AND REUSE EXISTING POINT OF USE WATER HEATER.

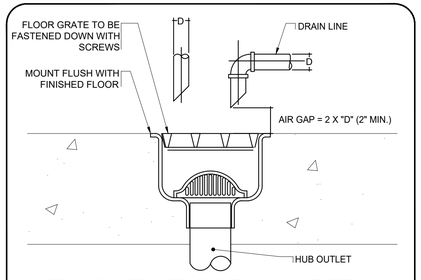
COORDINATE WITH GC AND MECH CONTRACTOR FOR ANY REQUIRED CONDENSATE LINES, IF REQUIRED.

PLUMBING LEGEND

—SAN—	SANITARY SEWER PIPING
—V—	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	PIPE UP
	PIPE DROP
FCO	FLOOR CLEAN OUT
	WALL CLEAN OUT
	P-TRAP
S.O.V.	SHUT-OFF VALVE
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
DCVA	DOUBLE CHECK VALVE ASSEMBLY
	GATE VALVE
	CHECK VALVE
	RECIRCULATION PUMP
	WATER HAMMER ARRESTER
FD	FLOOR DRAIN
I.W.	INDIRECT WASTE
	FLOOR SINK
	POINT OF CONNECTION
	EXPANSION TANK
	BALANCING VALVE
	THERMOSTATIC MIXING VALVE

FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET	E	-	E	E
LAVATORY	E	E	E	E
MOP SINK	1/2"	1/2"	3"	2"
ACCESSIBLE HAND SINK	1/2"	1/2"	2"	1-1/2"
1-COMP SINK	1/2"	1/2"	I.W	-
RAPID RINSER	1/2"	1/2"	I.W	-
3-COMP SINK	3/4"	3/4"	I.W	2"
HAND SINK	1/2"	1/2"	2"	1-1/2"
FLOOR DRAIN	--	--	3"	2"
FLOOR SINK	--	--	4"	2"



FLUSH TO FLOOR SINK DETAIL

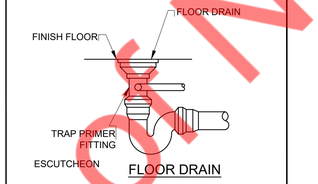
NOT TO SCALE

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

ENERGY CONSERVATION NOTES

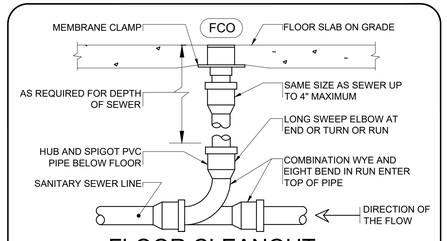
1. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE-RETARDENT. FACTORY APPLIED JACKET.PROVIDE COLD WATER PIPING WITH FACTORY- APPLIED VAPOR BARRIER.INSULATION REQUIREMENT SHOULD COMPLY WITH CALIFORNIA STATE ENERGY CODE 2022, SECTION 150.0.
2. AS PER TITLE 24 CALIFORNIA STATE ENERGY CODE 2022, SERVICE WAER HEATING EQUIPMENT SHALL BE EQUIPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTING FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTING FOR THE INTENDED USE AS PER TABLE 613.1 OF THE CALIFORNIA STATE PLUMBING CODE.
4. AS PER TITLE 24 CALIFORNIA STATE ENERGY CODE 2022, SECTION 613.5, TEMPERATURE CONTROL VALVE SHALL BE PROVIDED TO AUTOMATICALLY REGULATE THE TEMPERATURE OF HOT WATER DELIVERED TO PLUMBING FIXTURE TO A RANGE OF 105°F (41°C) MINIMUM TO 120°F (49°C) MAXIMUM.
5. INSULATION REQUIREMENT SHOULD COMPLY WITH TITLE 24 CALIFORNIA STATE ENERGY CODE 2022. REFER BELOW TABLE FOR MINIMUM PIPE INSULATION THICKNESS ACC. TO CALIFORNIA PLUMBING CODE 2022 SECTION 609.11, TITLE 24 2022 CALIFORNIA ENERGY CODE 2022 SECTION 150(J).

MINIMUM PIPE INSULATION THICKNESS				
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)	
	CONDUCTIVITY BTU· IN./ (H· FT2· °F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½
141-200	0.25-0.29	125	1.5	1.5
105-140	0.22-0.28	100	1.0	1.5



TRAP RESEAL DETAIL

NOT TO SCALE



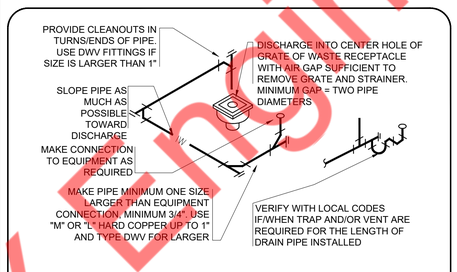
FLOOR CLEANOUT

NOT TO SCALE

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

FLOOR CLEANOUT DETAIL NOTES

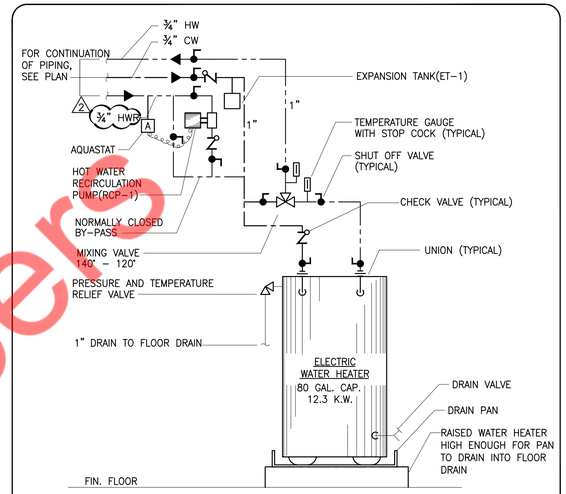
1) LOCATE CLEANOUT AT THIS LOCATIONS:
   A) BUILDING EXIT
   B) AT TURNS OF PIPES GREATER THAN 45 DEGREES
   C) AT 90' INTERVALS ON STRAIGHT RUNS
   D) WHERE IS SHOWN ON PLANS
   E) WHERE IS 18" CLEAR AROUND



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.

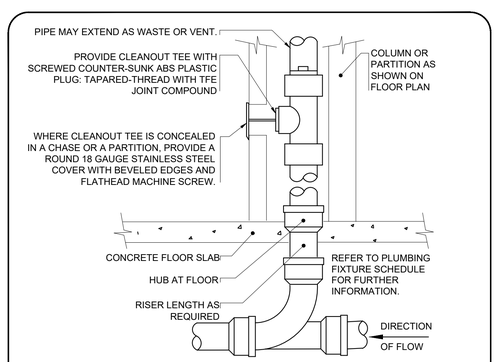
INDIRECT WASTE CONNECTION DETAIL

NOT TO SCALE



ELECTRIC WATER HEATER

NOT TO SCALE



WALL CLEANOUT

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.

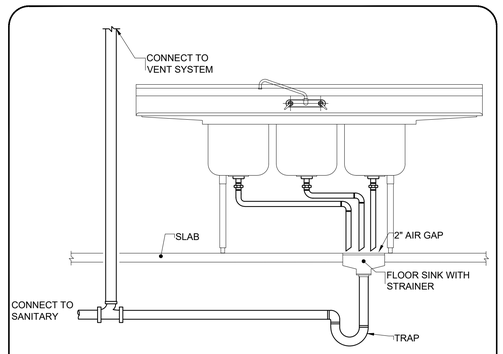
RESTROOM FIXTURE SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER Hot	WATER Cold	WASTE Waste	Usage	Spec
G	1	WATER CLOSET	EXISTING TO REMAIN	EXISTING TO REMAIN		E	E	-	-
E	1	LAVATORY***	EXISTING TO REMAIN	EXISTING TO REMAIN			E		
E1	1	LAVATORY FAUCET	EXISTING TO REMAIN	EXISTING TO REMAIN	E	E		-	-

KITCHEN EQUIPMENT PLUMBING SCHEDULE

Item No.	Qty.	Description	MANUFACTURER	MODEL	WATER Hot	WATER Cold	WASTE Direct	WASTE Indirect
7	1	***ONE COMPARTMENT SINK	REGENCY 16 TYPE 304	600S1181818XRT	1/2"	1/2"		2"
8	1	THREE COMPARTMENT SINK+	ADVANCE TABCO	FC-3-1620-18RL	3/4"	3/4"		2"
9	1	***ACCESSIBLE HAND SINK	KROWNE	HS-50	1/2"	1/2"	2"	
10	1	MOP SINK+	ADVANCE TABCO	9-OP-20	1/2"	1/2"	3"	
14	1	RAPID RINSER	BLENDTEC	JRE-510		1/2"		3/4"
39	1	HAND SINK	REGENCY	600HS12SP	1/2"	1/2"	2"	
FS	2	FLOOR SINKS	ZURN	Z1900-23-31 (ZS1900 IF IN EXPOSED AREAS)			4"	
FD	3	FLOOR DRAINS*	ZURN	ZS415 W/ TYPE BS STRAINER			3"	
TMV	2	THERMAL MIXING VALVES	WATTS	LFMMV	1/2"	1/2"		

*PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS/+HOT WATER 140°F. ***MIXING VALVE REQUIRED.



RECESSED FLUSH IN FLOOR WITH FLOOR SINK

NOT TO SCALE

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GENERAL NOTES, SCHEDULES & DETAILS

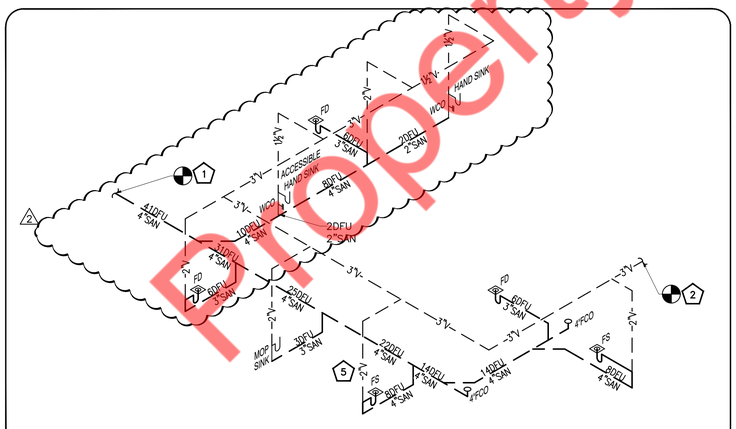
P-1

GENERAL NOTES

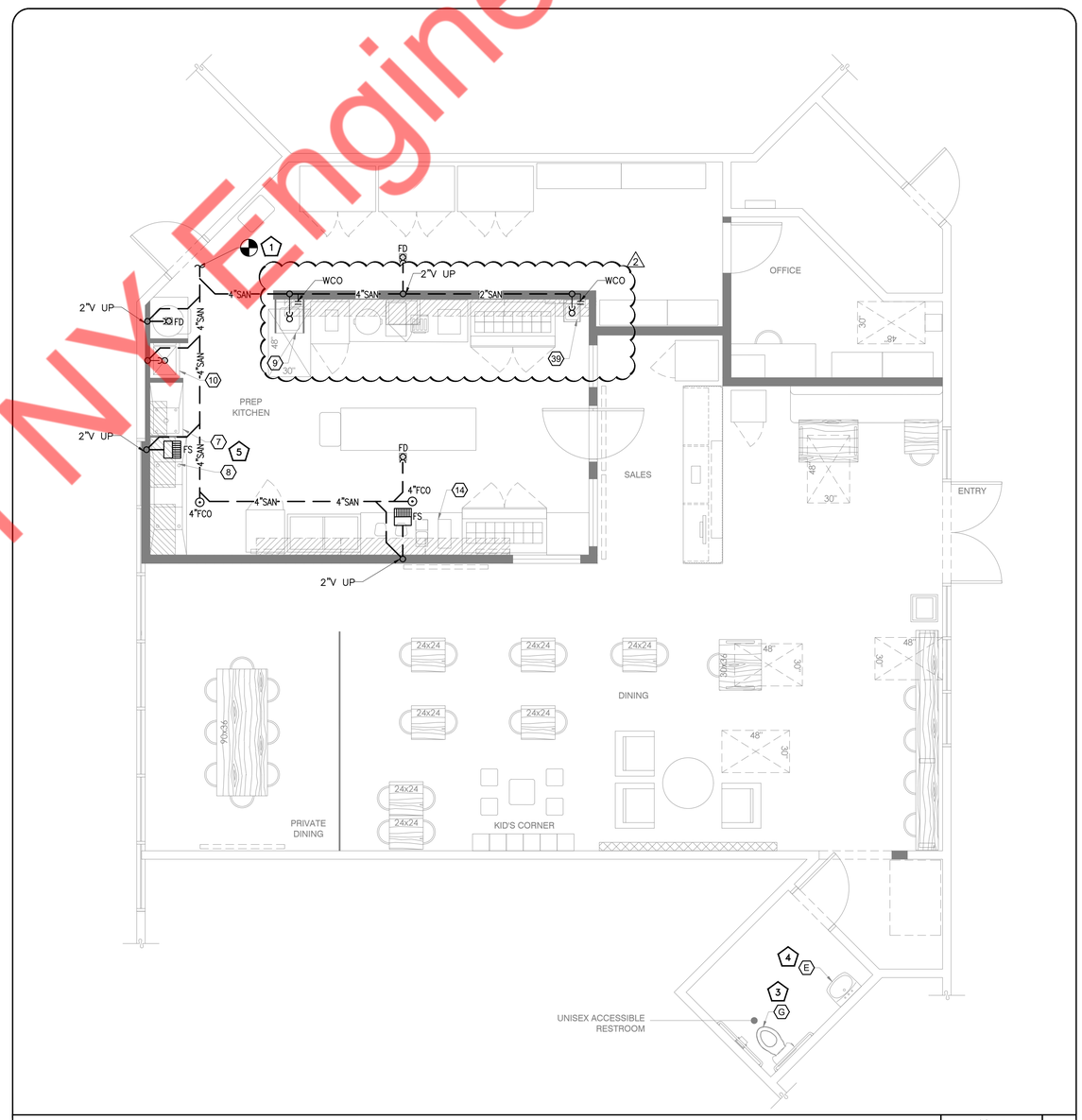
1. UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/8" PER FOOT OF RUN FOR PIPE 4" AND OVER, 1/4" PER FOOT FOR PIPE 3-1/2" OR SMALLER.
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. ALL CLEANOUTS TO BE ACCESSIBLE.
5. REFER SANITARY RISER DIAGRAM FOR ALL PIPE SIZES.
6. PROVIDE RECTOR SEAL 'SURE SEAL' ON EACH FLOOR DRAIN NOT RECEIVING INDIRECT DRAINAGE.
7. CONTRACTOR TO VERIFY THE EXISTING SANITARY AND VENT LOCATION AND ROUTING. MAKE NECESSARY CHANGES TO NEW PIPING AS PER THE EXISTING SITE CONDITION.

SANITARY KEY NOTES

1. CONNECT NEW 4" SANITARY LINE TO EXISTING SANITARY LINE IN SPACE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION, SIZE, INVERT AND FLOW DIRECTION OF EXISTING SANITARY LINE AND MAKE NECESSARY CHANGES IF REQUIRED.
2. CONNECT NEW 3" VENT PIPE TO EXISTING VENT LINE IN SPACE. CONTRACTOR TO FIELD VERIFY FOR EXACT LOCATION AND SIZE ON SITE OF EXISTING VENT LINE AND MAKE NECESSARY CHANGES IF REQUIRED.
3. EXISTING WATER CLOSET TO REMAIN WITH EXISTING SANITARY AND VENT CONNECTION, ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
4. EXISTING LAVATORY TO REMAIN WITH EXISTING SANITARY AND VENT CONNECTION, ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
5. CONTRACTOR TO ROUTE INDIRECT WASTE FROM 3-COMPARTMENT SINK AND 1-COMPARTMENT SINK TO THE NEARBY FLOOR SINK WITH APPROVED AIR GAP AS REQUIRED BY THE LOCAL CODES.



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



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

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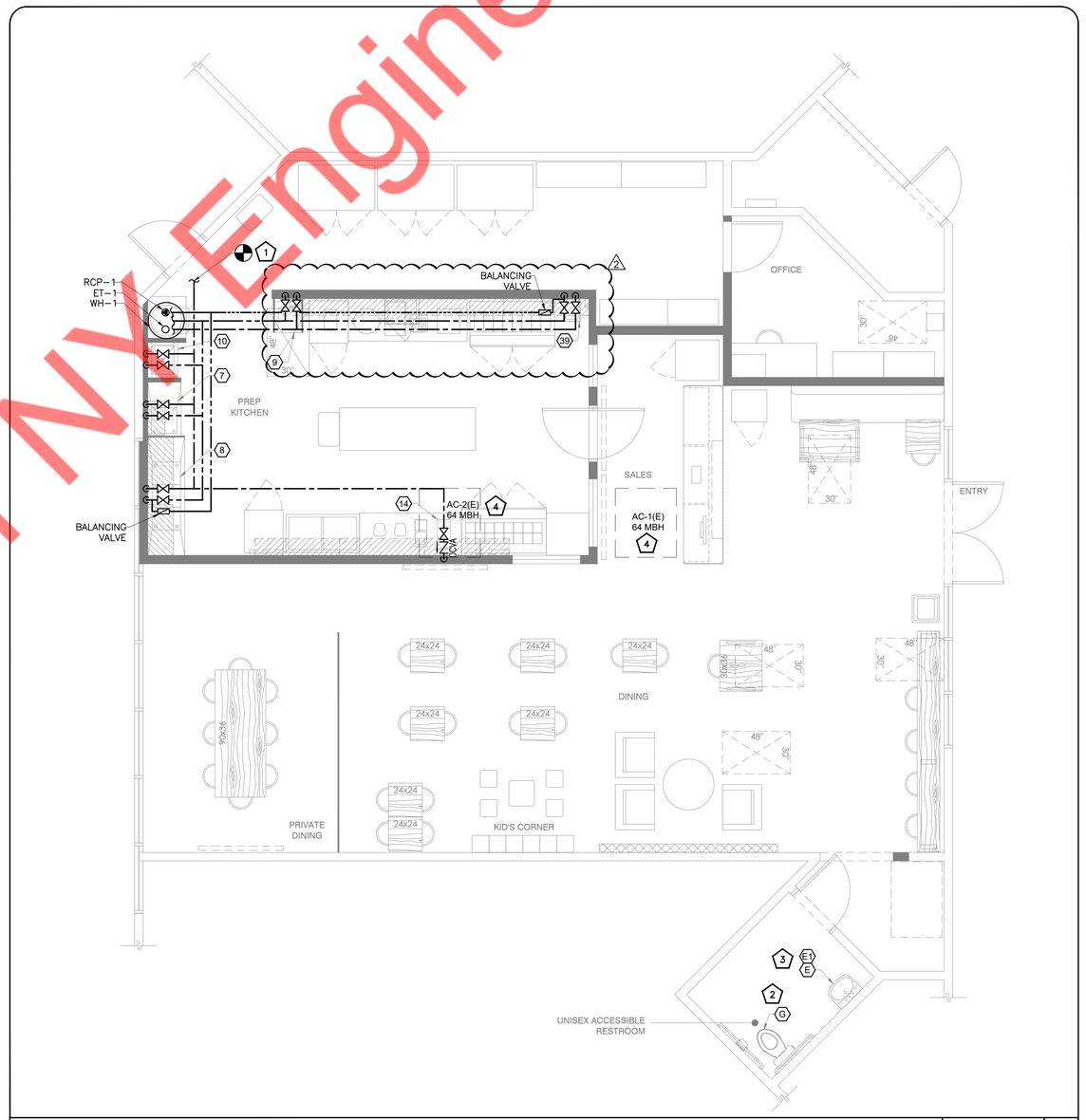
SANITARY PLAN AND RISER

P-2



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

GENERAL NOTES

1. CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER CALIFORNIA STATE ENERGY CODE 2022 (REFER NOTES ON SHEET P-1).
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
4. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.
5. WATER HEATER (WH-1) DRAIN TO FLOOR DRAIN.
6. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.

WATER AND GAS PIPING KEY NOTES

1. EXTEND AND CONNECT NEW 1" CW LINE TO EXISTING COLD WATER LINE WITH EXISTING BFP AND WATER METER IN SPACE. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING WATER LINE AND MAKE NECESSARY CHANGES IF REQUIRED.
2. EXISTING WATER CLOSET TO REMAIN WITH EXISTING CW CONNECTION, ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING & REPLACE IF REQUIRED.
3. EXISTING LAVATORY TO REMAIN WITH EXISTING POINT OF USE WATER HEATER, CW/HW CONNECTION, ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING & REPLACE IF REQUIRED.
4. EXISTING AC-1(E) / AC-2(E) TO REMAIN WITH EXISTING GAS PIPING, GAS METER, RELATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED. CONTRACTOR TO FIELD VERIFY EXISTING AVAILABLE PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED FOR MECHANICAL EQUIPMENT.

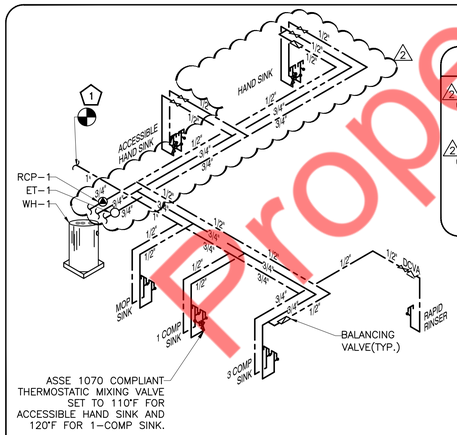
RECIRCULATION PUMP SCHEDULE	
MANUFACTURER & MODEL	GRUNDFOS UP-15-18 B5
EQUIPMENT TAG	RCP-1
STATUS	NEW
GPM	2
WATER TEMP.(°F)	140
PUMP TYPE	INLINE
MHP	85 WATTS
V/PH/HZ	115/1/60
RPM	2280
SERVICE FACTOR	1.0

NOTE:

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

NEW STORAGE WATER HEATER SCHEDULE	
MANUFACTURER	AO SMITH
MODEL	DVE-80
EQUIPMENT TAG	WH-1
STATUS	NEW
CAPACITY	80 GALLONS
QUANTITY	1
KW	12.3
FLOW RATE	63 GPH*
VOLTAGE	208/3/60
AMPERAGE	34
WEIGHT	280 LBS

1. *SIMULTANEOUS ELEMENT OPERATION@80° F TEMPERATURE RISE.
2. INSTALL NEW EXPANSION TANK AMTROL MODEL THERM-X-TROL ST-12C-DD, 6.4 (ET-1) GAL PER LOCAL CODE REQUIREMENTS.



FIXTURE FACTOR VALUE *

	1 WATER CLOSETS (E) @ 5.5	= 5.5
2	1 LAVATORIES (E) @ 1	= 1
	2 HAND SINK (N) @ 1	= 2
	1 COMP SINK (N) @ 1.5	= 1.5
	1 - 3 COMP SINK (E) @ 3	= 3
	1 MOP SINK (N) @ 3	= 3
2	1 **MISC. @ 0.5	= 0.5
	TOTAL	= 16.5

* TABLE A103.1 - 2022 CALIFORNIA PLUMBING CODE

1" Ø LINE REQUIRED

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

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WATER AND GAS PLAN AND WATER RISER

P-3