BUILDING DEPARTMENT NOTES:

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE 2021 INTERNATIONAL BUILDING CODE AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
2. TESTS WILL BE CONDUCTED UNDER DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS. THE TESTS WILL SHOW COMPLIANCE WITH IMC 2021 REQUIREMENTS AS OUTLINED IN SECTION [IBC 1704].
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.
5. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   - A. STANDARDS OF HEATING - IMC 2021 - 309.1
   - B. DUCT CONSTRUCTION AND INSTALLATION - IMC 2021 - 603
   - C. AIR INTAKES, EXHAUSTS AND RELIEF- IMC 2021 - 401.5
   - D. AIR FILTERS -IMC 2021 - 605
   - E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS -IMC 2021 - 606
6. VENTILATION FOR ALL AREA SHALL COMPLY WITH IMC 2021 - 401
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 AS REQUIRED BY IMC 2021- 403.3
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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
11. SMOKE DETECTOR SHALL MEET UL268A
12. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
13. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY IMC 2021 - 403.3. HVAC SYSTEM SHALL BE BALANCED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS AS REQUIRED.
14. HVAC AND SERVICE WATER HEATING CONTROLS SHALL BE TASTED TO DOCUMENT THAT CONTROL DEVICES, COMPONENT, EQUIPMENT AND SYSTEM ARE CALIBRATED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATION.
15. AIR BALANCING REPORT SHOULD BE PROVIDED IN ACCORDANCE WITH IMC 2021.
16. DUCT AND PLENUM INSULATION SCHEDULE.
    - A. CONCEALED, RECTANGULAR, ROUND AND FLAT OVAL, SUPPLY-RETURN, OUTDOOR AND EXHAUST AIR DUCT AND AIR PLENUM INSULATION:
    - B. FLEXIBLE FIBER BOARD OR POLYOLEFIN WITH MINIMUM THERMAL RESISTANCE AS FOLLOWS:

UNCONDITIONED SPACES WITHIN BUILDING :	R-6
WITHIN BUILDING ENVELOPE ASSEMBLY :	R-8
OUTSIDE OR BUILDING :	R-8

TESTING, ADJUSTING AND BALANCING FOR HVAC:

1.1 SUMMARY
- A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:
  - 1. AIR SYSTEMS: CONSTANT-VOLUME

1.2 QUALITY ASSURANCE
- A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.

1.3 EXECUTION
- A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO NEW WORK PRIOR TO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.
- C. THE REPORT SHALL INDICATE A SCHEMATIC DIAGRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.
- D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.
- E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

GENERAL NOTES:

- A. CONTRACTOR SHALL VERIFY THAT ALL EQUIPMENT, AS SHOWN ON THESE DRAWINGS, WILL NOT CONFLICT WITH ANY DRAINS, SCUTTLES, JOINTS, VENTS, PIPING OR EQUIPMENT.
- B. CONTRACTOR TO INSTALL ALL DUCTWORK, UNITS AS PER LOCAL CODE AND SMACNA REQUIREMENTS.
- C. ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM ANY EXHAUST FANS OR PLUMBING VENT.
- D. PROVIDE VIBRATION ISOLATION DEVICES AND FLEXIBLE CONNECTIONS TO ALL MOVING MACHINERY.
- E. ALL FLEXIBLE DUCTS SHALL BE SUPPORTED EVERY 3'-0" WITH 2" WIDE GALV. STEEL BANDS WITH A MINIMUM OF ONE PER EACH SECTION OF FLEXIBLE DUCT. THE MAXIMUM ALLOWABLE FLEXIBLE DUCT SHALL BE 14'-0".
- F. NO FLEXIBLE DUCTWORK SHALL BE ALLOWED ABOVE INACCESSIBLE CEILINGS.
- G. ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
- H. NO ALLOWANCE MADE FOR LINER OR WRAP.
- I. CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES, ALL REQUIRED OPENINGS AND EXCAVATIONS. ALL REQUIRED OPENINGS IN FOUNDATIONS, FLOORS, WALLS AND ROOF SHALL BE CONSTRUCTED INTO THE STRUCTURE WITH THE USE OF SLEEVES, CURBS, ETC. CUTTING AND PATCHING SHALL BE HELD TO A MINIMUM.
- J. ALL SUPPLY AND RETURN AIR DEVICES SHALL BE PAINTED AS REQUIRED BY THE OWNER.
- K. ALL DUCTWORK IS TO BE INSTALLED AS HIGH AND AS TIGHT TO STRUCTURE AS POSSIBLE.
- L. THE INSTALLING CONTRACTOR IS TO PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS, SHOWING ALL FIELD MODIFICATIONS, AT THE CONCLUSION OF THE PROJECT.
- M. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/ BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.
- N. COORDINATE ALL MD AND FSD WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENT.
- O. ALL CONCEALED DUCTS SHALL HAVE EXTERNAL INSULATION.
- P. PROVIDE ACOUSTIC LINE FOR THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN MAIN DUCTS.
- Q. PROVIDE CORD OPERATED DAMPERS IN INACCESSIBLE CEILING.

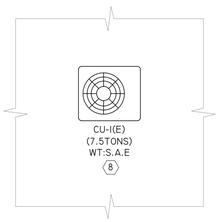
CONTRACTOR NOTES:

1. CONTRACTOR SHALL VERIFY WITH THE OWNER REGARDING THE INSTALLATION OF A NEW THERMOSTAT WITH MULTIPLE REMOTE TEMPERATURE SENSORS FOR AVERAGING SPACE TEMPERATURE. IF APPROVED BY THE OWNER, PROVIDE HONEYWELL T10+ PRO THERMOSTAT.
2. BEFORE PROCUREMENT, CONFIRM COMPATIBILITY OF THE THERMOSTAT WITH THE HVAC UNIT AND WITH HONEYWELL SPECIFICATIONS.

KEYED NOTES:

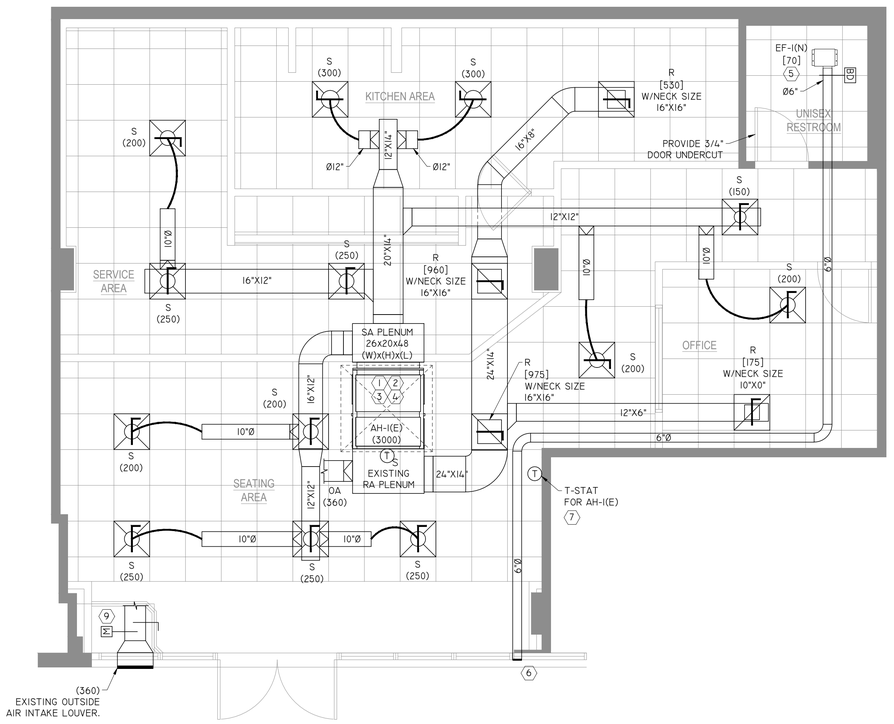
1. EXTEND FULL SIZE SUPPLY & RETURN DUCTWORK FROM HVAC EQUIPMENT TO SPACE. EXTEND AS SHOWN. ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN MAIN DUCTS.
2. CONTRACTOR TO USE EXISTING MECHANICAL UNIT IN SPACE ALONG WITH ALL ACCESSORIES.
3. MECHANICAL CONTRACTOR TO INSTALL NEW CONDENSATE DRAIN PIPING AND CONNECT 1-1/4" CD FROM AC TO NEAREST APPROVED PLUMBING DRAIN FIXTURE WITH AIR GAP FITTING. PROVIDE CONDENSATE PUMP AS/IF REQUIRED.
4. PROVIDE REMOTE TEMP SENSOR MOUNTED AT RETURN AIR DUCT AND WIRE BACK TO T-STAT.
5. CEILING MOUNTED EXHAUST FAN. FAN SHALL BE SUSPENDED FROM STRUCTURE ABOVE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION.
6. Ø6" TOILET EXHAUST DUCT UP TO FRONT WALL. TERMINATE THE DUCT WITH VENT CAP. COORDINATE WITH ARCHITECT AND LL FOR THE LOCATION.
7. REUSE 7-DAY PROGRAMMABLE THERMOSTAT. MOUNT THE THERMOSTAT ON THE WALL AT 48" A.F.F. COORDINATE THE EXACT LOCATIONS WITH THE ARCHITECT AND OWNER PRIOR TO ROUGH-IN. PROVIDE LOCKABLE COVER FOR THE THERMOSTAT.
8. OUTDOOR UNIT TO REMAIN AS IT IS ALONG WITH ACCESSORIES. CLEAN, REPAIR IF REQUIRED.
9. MD TO BE INTERLOCK WITH RESPECTIVE UNITS. IF NOT FOUND INSTALL VD AND MD ON OUTSIDE AIR DUCT. ADJUST THE VD TO SUPPLY 360 CFM TO HVAC UNIT.

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F1 PARTIAL PARKING DECK PLAN

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



G1 MECHANICAL FLOOR PLAN

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

FRESH HEALTHY CAFE

ISSUE

No.	DATE	DESCRIPTION

DWG TITLE:

MECHANICAL NOTES & FLOOR PLAN

SHEET No.

M-1

SPLIT SYSTEM (INDOOR UNIT) SCHEDULE

MAKE:- TRANE

UNIT TAG	LOCATION	AREA SERVED	TYPE	CAP. (TON)	TOTAL COOLING MBH	SENSIBLE COOLING MBH	HEATING KW	TOTAL CFM	OUTDOOR CFM	MAX RATED ESP. (IN. WG)	ELECTRICAL DATA			DIMENSIONS (HXWXD) (IN.)	PIPE SIZE (INCH)			WEIGHT (LBS.)	MODEL NO.
											PH/VOLT/HZ	MCA (A)	MOP (A)	UNIT	LIQ.	SUCTION	DRAIN (ID)		
AH-1(E)	SEE ON PLAN	SEE PLAN	CEILING SUSPENDED DUCTED	7.5 (S.A.E.)	96.0 (S.A.E.)	76.0 (S.A.E.)	25 (S.A.E.)	3000 (S.A.E.)	360	1.5 (S.A.E.)	3/460/60 (S.A.E.)	44 (S.A.E.)	45 (S.A.E.)	61.2" x 30.5" x 53"	1-1/8"	1/2"	1"	450 (S.A.E.)	TWE090 (S.A.E.)

NOTES FOR EXISTING UNIT :

1. EXISTING UNITS 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 UNITS 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 UNITS ON SITE.
5. CONTRACTOR TO FIELD VERIFY & ENSURE PROPER REFRIGERANT GAS CHARGING IN AC UNITS. IF REQUIRED, PERFORM REFRIGERANT GAS CHARGING AS PER MANUFACTURERS RECOMMENDATIONS.

SPLIT SYSTEM (OUTDOOR UNIT) SCHEDULE

UNIT TAG	LOCATION	INDOOR UNIT SERVED	CAP.TR	COOLING MBH	UNIT DIMENSIONS IN.(HXWXD)	WEIGHT (LBS)	PIPING DIMENSION		ELECTRICAL			REFRIGERANT	EER	IEER	MODEL NO.	MAKE
							LIQUID-HI PRESSURE (INCH)	GAS HIGH-PRESSURE (INCH)	(V/Hz/Ph)	MCA (A)	MOP (A)					
CU-1(E)	SEE ON PLAN	AH-1(E)	7.5 (S.A.E.)	96.0 (S.A.E.)	45" x 45.25" x 39"	400 (S.A.E.)	1-1/8"	1/2"	460/60/3 (S.A.E.)	16 (S.A.E.)	20 (S.A.E.)	R410 (S.A.E.)	12.8 (S.A.E.)	14.8 (S.A.E.)	TTA09044D (S.A.E.)	TRANE (S.A.E.)

NOTES FOR EXISTING UNIT:

1. EXISTING UNITS 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 UNITS 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 UNITS ON SITE.
5. CONTRACTOR TO FIELD VERIFY & ENSURE PROPER REFRIGERANT GAS CHARGING IN AC UNITS. IF REQUIRED, PERFORM REFRIGERANT GAS CHARGING AS PER MANUFACTURERS RECOMMENDATIONS.

FAN SCHEDULES

UNIT ID	MANUFACTURER	CFM	ESP(IN W.G.)	RPM	HP	VOLTS/PH	FLA(A)	WEIGHT (LBS)	MODEL	NOTES
EF-1(N)	GREENHECK	70	0.8	950	-	115/1	1.15	10	SP-B110	1,2,3,4

REMARK:

1. UL LISTED (HEAT OR STEAM)
2. AMCA AIR & SOUND CERTIFIED.
3. 2 YEARS PART WARRANTY.
4. INTERLOCK EXHAUST FAN WITH ROOM LIGHT.

AIR BALANCE

UNIT	AREA SERVED	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	RETURN AIR (CFM)	EXHAUST AIR(CFM)
AH-1(E)	SEE PLAN	3000	360	2640	0
EF-1(N)	SEE PLAN	0	0	0	70
TOTAL:		3000	360	2640	70
BUILDING PRESSURE:			290	POSITIVE	

NOTES:

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

SCHEDULE OF GRILLES/DIFFUSER

MAKE: TITUS

TAG	TYPE	DIMENSION(IN)	MODEL NO.	MAX NC dBA
S	SUPPLY	24X24	TDC-AA-NT	20
R	RETURN	24X24	50FF	25

NOTES FOR DIFFUSERS

1. ALL GRILLES : CONTRACTOR SHALL COORDINATE WITH LATEST ARCHITECTURAL
2. COORDINATE COLOR/FINISH WITH ARCHITECT.

FOR ROUND NECK DIFFUSERS:

- 6"-100 CFM
- 8"-105-175 CFM
- 10"-180-275 CFM
- 12"-280-400 CFM
- 14"-410-540 CFM
- 16"-545-650 CFM

VENTILATION CALCULATION

ROOM NAME	AREA (SQ.FT.)	NUMBER OF PEOPLE/1000sq.ft AS PER IMC 2021	NUMBER OF PEOPLE AS PER IMC 2021	NUMBER OF CHAIR	FINAL PEOPLE NO.	MIN OUTSIDE AIR AS PER IMC 2021		REQ. OA (CFM)	Provided OA (CFM)	EXHAUST AIRFLOW RATE (CFM/SQ.FT OR /FIXT.)	TOTAL EXHAUST (CFM)	PROVIDED EXHAUST (CFM)
						CFM/PEOPLE	CFM/SQ.FT					
DINING	594	70	42	14	16	7.5	0.18	227		0	0	0
SALES AREA	316	15	5	0	2	7.5	0.12	53		0	0	0
OFFICE	120	5	1	0	1	5	0.06	12	360	0	0	0
KITCHEN	252	20	6	0	3	7.5	0.12	53		0.7	0	0
RESTROOM	52	0	0	0	0	0	0	0		0	70	70
TOTAL	**1334**		**54**		**22**			**345**	**360**	**-**	**Total**	**70**

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FRESH HEALTHY CAFE

ISSUE

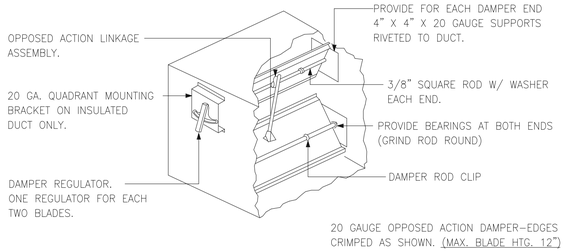
No.	DATE	DESCRIPTION

DWG TITLE:

MECHANICAL SCHEDULE

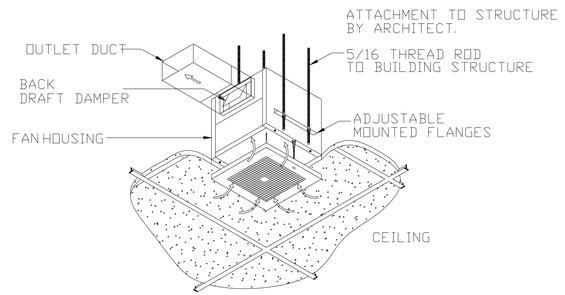
SHEET No.

M-2



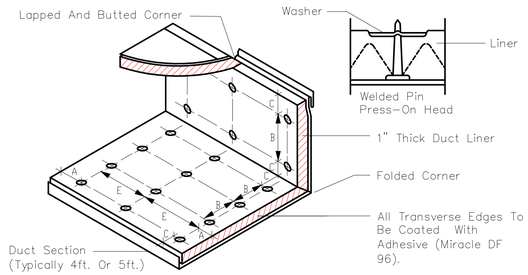
NOTE : 1. FOR DUCTS OVER 29" WIDE AND/OR OVER 12" HIGH.

1	LOW PRESSURE BALANCING DAMPER DETAIL
NONE	



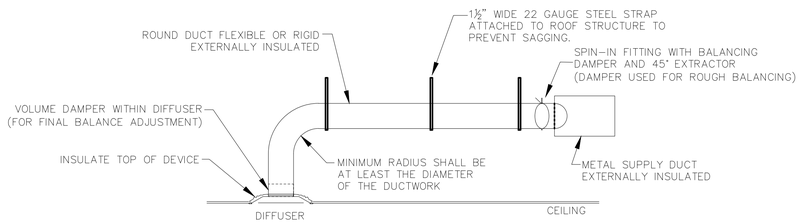
2	TYPICAL CEILING MOUNTED DETAIL
NONE	

Velocity	Dimensions			
	A	B	C	E
0–2500 FPM	3"	12"	4"	18"
2501–6000 FPM	3"	6"	4"	16"



COMMENTS:
1. LINER SHALL EXTEND A MINIMUM OF 15' FROM ALL SUPPLY RETURN AND EXHAUST DUCTWORK CONNECTED TO ANY FAN DRIVEN EQUIPMENT.
2. TOILET EXHAUST SYSTEM DUCTWORK DOES NOT REQUIRE LINING.
3. MAXIMUM SPACING FOR FASTENERS. ACTUAL INTERVALS ARE APPROXIMATE.
4. LINER ADHERED TO THE DUCT WITH 90% MIMIMUM AREA COVERAGE OF ADHESIVE.
5. THE VELOCITY RATED SIDE OF LINER MUST FACE THE AIR FLOW.

3	DUCT LINER INSTALLATION DETAIL
NONE	



COMMENTS:

1. REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR COMPONENT AND DEVICE SPECIFICATIONS.
2. SUPPORTS FOR FLEX DUCTWORK SHALL BE SPACED AT 4'–0" MAX. FLEX DUCT SHALL SAG NO MORE THAN ½"PER FOOT OF RUN.
3. ALL DUCT INSULATION SHALL HAVE A MINIMUM INSULATING VALUE OF R–6.
4. APPLY MASTIC DUCT SEALER AT EACH JOINT OR SEAM OR CONNECTION.
5. APPLY MASTIC TO DIFFUSER COLLAR AND SLIDE FLEX OVER WHILE STILL WET, BAND CLAMP AND TAPE.
6. SUPPORT DUCTWORK WITH 1½"WIDE 22 GAUGE STEEL STRAPS FIRMLY ATTACHED TO THE BUILDING STRUCTURE. SPACING SHALL BE MAXIMUM 10'–0" FOR RIGID DUCTWORK, AND MINIMUM 4'–0" FOR FLEXIBLE DUCTWORK. 12 GAUGE WIRE MAY BE SUBSTITUTED FOR STRAPS IF 1 ½" WIDE 22 GAUGE STEEL SADDLES ARE USED TO FULLY ENCIRCLE DUCT. REFER TO THE HVAC DUCT CONSTRUCTION STANDARDS PUBLISHED BY SMACNA FOR ADDITIONAL DETAILS. FULLY COMPLY WITH MECHANICAL CODES.

4	DIFFUSER / FLEX DUCT CONNECTION DETAIL
NONE	

Property of NY Engineers

FRESH HEALTHY CAFE

ISSUE

No.	DATE	DESCRIPTION

DWG TITLE:

MECHANICAL DETAILS

SHEET No.

M-3

ELECTRICAL SPECIFICATIONS

1. MATERIALS AND INSTALLATION, AS A MINIMUM, ARE TO CONFORM WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, THE LATEST EDITION OF N.F.P.A., AND THE LATEST EDITIONS OF THE LOCAL CODES AND ORDINANCES, INCLUDING ALL AMENDMENTS TO THE N.E.C. EQUIPMENT, WHERE APPLICABLE, WILL BE LISTED WITH THE UNDERWRITERS LABORATORIES, INC. QUALITY AND WORKMANSHIP ESTABLISHED BY DRAWINGS AND SPECIFICATIONS ARE NOT TO BE REDUCED BY THE ABOVE MENTIONED CODES.

2. BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF WORK. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.

3. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM IS TO BE FULLY OPERABLE AND ACCEPTANCE OF THIS SYSTEM BY THE ENGINEER/ARCHITECT MUST BE A CONDITION OF THE SUB CONTRACT.

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

5. CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE.

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

7. ALL REQUIRED INSURANCE TO BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OF PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

8. CONTRACTOR TO PAY FOR ALL PERMITS, FEES INSPECTIONS AND TESTINGS.

9. ELECTRICAL INSTALLATION TO MEET ALL STANDARD REQUIREMENTS OF LOCAL POWER AND TELEPHONE COMPANIES. ELECTRICAL CONTRACTOR SHALL CONTACT LOCAL POWER AND TELEPHONE COMPANIES PRIOR TO START OF CONSTRUCTION.

10. ALL WIRING SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG, EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER WITH THWN/THHN INSULATION. CONDUCTORS #10 AND SMALLER MAY BE SOLID; ALL THOSE #8 AND LARGER TO BE STRANDED.

11. ALL UNDERGROUND RACEWAYS SHALL BE MINIMUM 3/4", GALVANIZED RIGID STEEL CONDUIT OR SCHEDULE 40 PVC. ALL OTHER RACEWAYS TO COMPLY WITH GOVERNING CODES. WHERE RIGID STEEL IS USED, IT SHALL BE COMPLETELY COATED WITH AN ALKALI AND RUST RESISTANT BITUMASTIC PAINT, KOPPER NO. 50, AND THREADS SHALL BE COATED WITH ZINC CHROMATE. RIGID STEEL SHALL ALSO BE USED WHEN CONDUIT IS EXPOSED TO EXTERIOR ENVIRONMENT SUCH AS EXTERIOR OF BUILDING OR WHERE IT IS EXPOSED AND SUBJECT TO DAMAGE, INSIDE OF BUILDING.

11.1 ALL UNDERGROUND SERVICE CONDUITS/RACEWAYS ENTERING BUILDING OR STRUCTURE FROM OUTSIDE TO INSIDE SHALL BE SEALED, INCLUDING SPARE CONDUITS. SEALANT SHALL BE SUITABLE FOR THIS USE.

12. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND BE OF SPECIAL CONSTRUCTION FOR OTHER CLASSIFIED AREAS. ALL BOXES SHALL BE RECESSED (FLUSH) IN WALLS OR CEILINGS WHENEVER POSSIBLE.

13. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK TYPE. ENCLOSURES SHALL BE AS REQUIRED BY N.E.C. AND LOCATION (WEATHERPROOF, EXPLOSION PROOF, ETC.). ENGRAVED LAMINATED PLASTIC IDENTIFICATION PLATES SHALL BE FURNISHED AND INSTALLED ON ALL PANELS, DISCONNECT SWITCHES, CONTACTORS AND STARTERS.

13.1. ALL FUSES FOR SAFETY SWITCHES SHALL BE DUAL ELEMENT, CARTRIDGE TYPE. FUSES SHALL BE THOSE MANUFACTURED BY EITHER BUSSMAN OR LITTLEFUSE. THE CONTRACTOR SHALL FURNISH TO THE OWNER ONE SPARE FUSE FOR EACH SIZE AND TYPE OF FUSE INSTALLED. FUSES 600 AMPS OR LESS SHALL BE CLASS RK1, TYPICAL UNLESS OTHERWISE NOTED. FUSES OVER 600 AMPS SHALL BE CLASS L.

14. ALL GENERAL PURPOSE SWITCHES AND RECEPTACLES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. CATALOG NUMBERS LISTED ARE LEVITON: HOWEVER, COMPARABLE DEVICES BY PASS & SEYMOUR, BRYANT, OR ARROW HART WILL BE ACCEPTED. COLOR OF DEVICES AND PLATES SHALL BE DICTATED BY ARCHITECT/OWNER.

A. SWITCHES: LEVITON #CSB1-20I (SALES AREA); LEVITON #CSB1-20B (SERVICE LINE)
B. RECEPTACLES: LEVITON #BR20-I (SALES AREA); LEVITON #BR20-B (SERVICE LINE)
C. COVER PLATES: STAINLESS STEEL

NOTE: ALL OTHER REQUIRED DEVICES SHALL MATCH IN COLOR AND STYLE.

15. 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 NECESSARY DEVICES AND COMPONENTS FOR EQUIPMENT BE PLACED IN PROPER WORKING ORDER.

16.1. A SEPARATE, GREEN TYPE THW COPPER GROUND CONDUCTOR SHALL BE RUN FROM GROUND LUG OF EACH GROUNDED RECEPTACLE TO AN APPROVED CONNECTION INSIDE THE ENCLOSING STEEL OUTLET BOX. DEVICE MOUNTING SCREWS SHALL NOT BE CONSIDERED AN APPROVED GROUND.

16.2. A SEPARATE GROUND CONDUCTOR SHALL BE INSTALLED IN EVERY CONDUIT AND RACEWAY AND SECURELY BONDED IN AN APPROVED GROUNDING TERMINAL AT BOTH ENDS OF THE RUN. THE GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH TABLE 250.122 OF THE N.E.C. CONTRACTOR SHALL SIZE CONDUIT TO ACCOMMODATE ADDITIONAL CONDUCTOR.

16.3. GROUND RODS SHALL BE 5/8" DIAMETER, TEN (10) FEET LONG COPPERCLAD STEEL. OBTAIN TWENTY FIVE (25) OHMS MAXIMUM RESISTANCE AS READ WITH A GROUNDING RESISTANCE TESTER, USING TWO REFERENCE RODS. IF TWENTY FIVE (25) OHMS CANNOT BE ACHIEVED, CONTRACTOR SHALL PROVIDE ADDITIONAL RODS, UNTIL TWENTY FIVE (25) HAS BEEN OBTAINED.

17. LOAD DATA IS BASED ON INFORMATION GIVEN TO ENGINEER AT THE TIME OF DESIGN. VERIFY ALL EQUIPMENT NAMEPLATE RATINGS BEFORE ORDERING.

18. CIRCUITS SHOWN ON PLANS ARE TO DETERMINE LOAD DATA AND PANEL SIZES. THE CONTRACTOR IS TO PROVIDE CIRCUITS AND ROUTING OF CONDUITS TO SUIT JOB CONDITIONS.

19. FURNISH AND INSTALL DISCONNECT SWITCHES, WIRING, AND CONNECTIONS ON AIR CONDITIONING SYSTEM AS SHOWN ON PLANS. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE WITH MECHANICAL CONTRACTOR REGARDING SUPPLY AND INSTALLATION OF ALL REQUIRED CONTROLS.

19.1 ELECTRICAL CONTRACTOR SHALL MAKE LINE VOLTAGE CONNECTIONS TO THE MAIN TERMINAL BLOCK OR LUGS ON ALL EQUIPMENT SHOWN. ANY ADDITIONAL LINE VOLTAGE CONNECTIONS BETWEEN VARIOUS COMPONENTS OF A MULTI-COMPONENT PIECE OF EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE EQUIPMENT INSTALLER, UNLESS THE FULL SCOPE OF THE ELECTRICAL INSTALLATION REQUIREMENTS ARE PROVIDED TO THE ENGINEER AT THE TIME OF DESIGN.

20. THE DISCONNECT SWITCH, FUSE SIZES, CONDUIT AND WIRE SHOWN FOR ALL HVAC ARE SIZED PER THE MANUFACTURER, AND MODEL NUMBER LISTED ON THE MECHANICAL PLANS. IF THERE IS AN EQUAL MANUFACTURER, OR OTHER MANUFACTURER PROVIDED, THE MECHANICAL/ GENERAL CONTRACTOR SHALL BEAR ANY ADDITIONAL COST INCURRED IF THE ELECTRICAL IS NOT EQUAL TO SPECIFICATIONS.

21. ALL SWITCHBOARDS, PANELS, STARTERS, CONTACTORS ETC., SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER, THE SYSTEM DESIGN IS BASED ON SQUARE "D"; HOWEVER, COMPARABLE EQUIPMENT BY SIEMENS, G.E. AND CUTLER HAMMER ONLY WILL BE ACCEPTABLE. ALL PANELBOARDS SHALL HAVE BOLT-ON TYPE CIRCUIT BREAKERS. TANDEM AND HALF-SPACE CIRCUIT BREAKERS SHALL NOT BE USED.

21.1. TYPEWRITTEN CIRCUIT INDEX SHALL BE AFFIXED TO INSIDE SURFACE OF EACH PANELBOARD DOOR, CLEARLY INDICATING AREA AND TYPE OF LOAD SERVED BY EACH BRANCH CIRCUIT PROTECTIVE DEVICE, INCLUDING SPARES. HAND PRINTED WILL NOT BE ACCEPTED.

21.2. ENGRAVED, LAMINATED PLASTIC IDENTIFICATION PLATES SHALL BE FURNISHED AND INSTALLED ON ALL PANELS AND SWITCHBOARDS. PLATES SHALL BE AFFIXED TO FRONT OF PANELS, INDICATING PANEL NAME, VOLTAGE AND AMPERAGE.

22. ALL UNDERGROUND PVC CONDUIT RUNS SHALL HAVE RIGID STEEL ELBOWS AND RIGID STEEL SECTIONS AT SLAB PENETRATIONS WHERE SUBJECT TO POSSIBLE DAMAGE.

23. THE ELECTRICAL CONTRACTOR SHALL MEET AND COORDINATE WITH THE LOCAL POWER COMPANY AT THE SITE PRIOR TO CONSTRUCTION. AT THAT TIME, THE CONTRACTOR SHALL COORDINATE ALL RELATED WORK WITH THE UTILITY COMPANY'S RESPONSIBILITIES TO MEET THE OWNER'S SCHEDULE.

24. ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN AN APPROVED RACEWAY, EMT, IMC, RIGID GALVANIZED CONDUIT OR SCHEDULE 40 P.V.C. TYPE 'MC', ELECTRICAL NON-METALLIC TUBING, & FLEXIBLE METAL CONDUIT MAY BE USED FOR BRANCH CIRCUITING AS ALLOWED BY THE N.E.C. & AHJ. MAXIMUM NUMBER OF 120V CIRCUITS ALLOWED IN A COMMON CONDUIT SHALL BE SIX (6). THE CONTRACTOR SHALL STRICTLY CONFORM TO THE N.E.C. REQUIREMENTS OF DERATING FOR CONDUCTOR AMPACITY AND CONDUIT FILL. NO CONDUITS SHALL BE INSTALLED, EXPOSED ON ROOF.

24.1. CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS:

208Y SYSTEM	PHASE SEQUENCE
NEUTRAL – WHITE	ABC, TOP TO BOTTOM
PHASE A – BLACK	LEFT TO RIGHT, FRONT
PHASE B – RED	TO BACK
PHASE C – BLUE	
GRD.CON – GREEN	

24.2. WHEN MAIN ELECTRICAL SERVICE HAS A WIREWAY, E.C. SHALL TAP OFF OF ALL SERVICE ENTRANCE FEEDERS (PARALLEL CONDUCTORS) FOR TOTAL AMPACITY & BALANCING.

25. CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS MADE THROUGH FIRE RATED WALLS, CEILINGS, SLABS, ETC. PENETRATION SEALS SHALL BE PER U.L. ASSEMBLY STANDARDS.

26. CONTRACTOR SHALL PROVIDE SHOP DRAWING SUBMITTALS FOR LIGHT FIXTURES, SWITCHBOARDS, WIRING DEVICES, EMERGENCY GENERATOR/TRANSFER EQUIPMENT, AND ALL SYSTEMS (FIRE ALARM, SECURITY, ETC.). PROVIDE TWO (2) COPIES, TEN (10) DAYS PRIOR TO BID DATE FOR ENGINEER'S APPROVAL TO SUBMIT. ENGINEER'S APPROVAL OF THE PRIOR APPROVAL PACKAGE WILL BE CONSIDERED PRELIMINARY. FINAL APPROVAL WILL BE CONTINGENT UPON REVIEW OF FINAL SHOP DRAWINGS. ALL PROPOSED ALTERNATES MUST BE INDUSTRY STANDARD EQUALS TO THE ITEMS SPECIFIED AS THE BASIS OF DESIGN; HOWEVER, IF THE ITEMS ARE NOT CONSIDERED EQUAL BY THE ENGINEER, IT SHALL BE DISAPPROVED FOR FINAL SUBMITTAL. IF ELECTRICAL CONTRACTOR/ GENERAL CONTRACTOR DOES NOT SUBMIT SHOP DRAWINGS TO ELECTRICAL ENGINEER FOR ITEMS LISTED ABOVE, ELECTRICAL ENGINEER WILL NOT BE RESPONSIBLE FOR ANY OMISSIONS AND/OR ERRORS DUE TO SHOP DRAWINGS NOT SUBMITTED. SHOP DRAWINGS WILL ONLY BE REVIEWED TWICE AS PART OF THIS CONTRACT. ADDITIONAL SHOP DRAWING REVIEWS SHALL BE INVOICED AT $85.00 PER HOUR, BILLABLE TO THE SUB-CONTRACTOR, C.O.D.

27. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF CONTRACT DRAWINGS AT JOB SITE WITH COLORED MARKINGS INDICATING PROGRESS OF WORK. THIS SET OF CONTRACT DRAWINGS IS TO BE SEPARATE FROM AND IN ADDITION TO CONTRACTOR'S CONSTRUCTION SET. EVERY UNIT OF EQUIPMENT, DEVICE, CONDUIT AND WIRE IS TO MARKED WHEN INSTALLED. USE GREEN TO INDICATE INSTALLATION AS SHOWN ON DRAWINGS AND USE RED TO INDICATE FIELD CHANGES. UPON COMPLETION OF WORK, THIS SET OF CONTRACT DRAWINGS IS TO BE TURNED OVER TO, AND BECOME PROPERTY OF THE ARCHITECT.

28. THE OWNER RESERVES THE RIGHT TO REVISE THE DRAWING FROM TIME TO TIME TO INDICATE CHANGES IN THE WORK. WHEN REVISED DRAWINGS AND/OR ANY REVISIONS ARE ISSUED, THE CONTRACTOR SHALL EVALUATE THE CHANGES PROMPTLY, BEFORE INSTALLATION OF ANY ITEM OR PERFORMANCE THE WORK INDICATED BY THE REVISED DRAWINGS OR REVISIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IN WRITING THAT THE REVISED DRAWINGS INVOLVE AN ADDITION OR DEDUCTION OF A SPECIFIC AMOUNT OF MONEY TO THE CONTRACT PRICE. THE CONTRACTOR SHALL NOT PROCEED WITH THE REVISED WORK WITHOUT PRIOR WRITTEN APPROVAL BY THE ARCHITECT/ENGINEER OF THE COST OF THE REVISED WORK.

29. IF ELECTRICAL CONTRACTOR HAS QUESTIONS, OR IN THEIR OPINION FINDS OMISSIONS OR ERRORS ON ELECTRICAL DOCUMENTS, IT IS THEIR RESPONSIBILITY TO BRING THIS TO THE ATTENTION OF THE ELECTRICAL ENGINEER/ARCHITECT/OWNER IMMEDIATELY. IF ELECTRICAL CONTRACTOR PROCEEDS WITH ANY CHANGES TO THE CONTRACT DOCUMENTS WITHOUT WRITTEN PRIOR APPROVAL FROM THE ELECTRICAL ENGINEER/ARCHITECT/OWNER WILL NOT BE COMPENSATED.

30. CONTRACTOR SHALL PROVIDE TWO (2) COPIES OF THE PROPOSED SITE LIGHT FIXTURE PACKAGE TEN (10) DAYS PRIOR TO BID DATE FOR ENGINEER'S APPROVAL TO SUBMIT. ENGINEER'S APPROVAL OF THE PRIOR APPROVAL PACKAGE WILL BE CONSIDERED PRELIMINARY. FINAL APPROVAL WILL BE CONTINGENT UPON REVIEW OF FINAL SHOP DRAWING. ALL PROPOSED ALTERNATES MUST BE INDUSTRY STANDARD EQUALS TO THE SITE FIXTURES SPECIFIED AS THE BASIS OF DESIGN; HOWEVER, IF THE SITE FIXTURE IS NOT CONSIDERED EQUAL BY THE ENGINEER, IT SHALL BE DISAPPROVED FOR FINAL SUBMITTAL. ALTERNATE SITE FIXTURES SHALL INCLUDE A COMPUTER GENERATED POINT-BY-POINT PHOTOMETRIC CALCULATION BASED ON THE PLANS (FIXTURE CHARACTERISTICS AND POLE PLACEMENT SHALL NOT BE ALTERED). THIS DIAGRAM SHALL SHOW COMPOSITE VALUES OF THE ILLUMINANCE PROJECTED FROM THE ARRANGEMENT OF LIGHT SOURCES AS SHOWN ON PLAN. COMPUTER PLOT DIAGRAM SHALL ALSO SHOW THE LOCATIONS OF THE POLES, SPACING BETWEEN POLES, THE MOUNTING HEIGHT USED IN THE CALCULATIONS, AND THE FIXTURE CATALOG NUMBER BEING USED.

ELECTRICAL LEGEND

- A — FLUORESCENT LIGHT FIXTURE, LETTER INDICATES TYPE
- B — RECESSED LIGHT FIXTURE, LETTER INDICATES TYPE
- C — WALL BRACKET LIGHT FIXTURE, LETTER INDICATES TYPE
- D — POLE WITH ARM MOUNTED FIXTURE, LETTER INDICATES TYPE
- NIGHT-LIGHT CAPABLE LIGHT FIXTURE
- x — EXIT LIGHT (ARROW INDICATES DIRECTION, SHADING INDICATES FACE)
- BATTERY POWERED EMERGENCY LIGHT
- TRACK LIGHTING
- S — SINGLE POLE SWITCH, LOWER CASE LETTER INDICATES LIGHT CONTROLLED, MOUNT 48" AFF UON
- S — OCCUPANCY SENSOR SWITCH, MOUNT 48" AFF UON
- OS — OCCUPANCY SENSOR SWITCH, CEILING MOUNT
- SINGLE RECEPTACLE, 125V, 20A MOUNT 18" AFF UON
- DUPLEX RECEPTACLE, MOUNT 18" AFF UON
- DUPLEX RECEPTACLE, FLUSH CEILING MOUNT
- DUPLEX RECEPTACLE, MOUNT ABOVE COUNTER HEIGHT UON
- QUADRAPLEX RECEPTACLE, MOUNT 18" AFF UON
- QUADRAPLEX RECEPTACLE, MOUNT ABOVE COUNTER HEIGHT UON
- DUPLEX RECEPTACLE, HORIZONTAL MOUNT
- 1/2 SWITCHED DUPLEX RECEPTACLE, MOUNT 18" AFF UON
- 30A — 1Ø, 250V. RECEPTACLE, AMPS AS NOTED, MOUNT 18" AFF UON
- SPECIAL RECEPTACLE AS NOTED
- JUNCTION BOX (FLUSH MOUNT IN FINISHED AREAS UON)
- DISCONNECT SWITCH, NEMA/SIZE/POLE/FUSES (250V., NEMA 1 UON)
- MAGNETIC MOTOR STARTER
- COMBINATION MAGNETIC MOTOR STARTER/DISCONNECT SWITCH
- LIGHTING OR POWER PANELBOARD
- COMBINATION TELEPHONE WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4"CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTOCEILING SPACE. MOUNT BOX 48" AFF UON
- STUB-UP, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF UON

- PHASE, NEUTRAL, ISOLATED GROUND CONDUCTORS
- DRIVEN GROUND ROD
- CONDUIT UP
- CONDUIT DOWN
- JUNCTION BOX FOR PADDLE FAN, FLUSH MOUNTED PER THE N.E.C.
- T — THERMOSTAT. PROVIDE SINGLE GANG BOX WITH 1/2" C STUBBED INTO CEILING SPACE. MOUNT 60" AFF UON (COORDINATE WITH MECHANICAL DRAWINGS PRIOR TO ROUGH-IN)
- MOTOR PERMANENTLY CONNECTED WITH FLEXIBLE CONDUIT
- S — SPEAKER
- T.V. CAMERA
- DATA OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF UON
- REFER TO LIKE NUMBERED NOTES/EQUIPMENT DESIGNATIONS
- TELEVISION OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF UON
- TELEPHONE WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF UON
- DATA WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH PULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF UON
- FLOOR MOUNTED TELEPHONE OUTLET
- TELEPHONE BACKBOARD (SIZE AS NOTED) #6 GROUNDING CONDUCTOR TO SERVICE GROUND.
- TC — TIME CLOCK
- PC — PHOTOCELL
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING WITH 2 #12, 1 #12 EG CONDUCTORS IN 1/2" CONDUIT MIN UON
- CONDUIT CONCEALED BELOW FLOOR SLAB OR FINISHED GRADE WITH 2 #12, 1 #12 EG CONDUCTORS IN 3/4" CONDUIT MIN UON
- CONDUIT EXPOSED ON WALL OR CEILING WITH 2 #12, 1 #12 EG CONDUCTORS IN 1/2" CONDUIT MIN UON

ABBREVIATIONS

ACC-CU	CONDENSING UNIT	HP	HORSE POWER
AFF	ABOVE FINISH FLOOR	IG	ISOLATED GROUND
AFG	ABOVE FINISH GRADE	JB	JUNCTION BOX
AFI	ARC FAULT INTERRUPTER	LSIG	LONG, SHORT, INSTANTANEOUS GROUND FAULT SETTING
A/H-AHU	AIR HANDLING UNIT	(N)	NEW
ATS	AUTOMATIC TRANSFER SWITCH	NEUT	NEUTRAL
BFG	BELOW FINISHED GRADE	NF	NON FUSED
C	CONDUIT	NIC	NOT IN CONTRACT
CLG	CEILING MOUNTED	NL	NIGHT LIGHT
CT	CURRENT TRANSFORMER	NP	NAME PLATE
DN	DOWN	NTS	NOT TO SCALE
EX-(E)	EXISTING	PNL	PANEL
EC	ELECTRICAL CONTRACTOR	RE-(R)	RELOCATED
E/F-EF	EXHAUST FAN	RTU	ROOF TOP UNIT
EG	EQUIPMENT GROUND	TL	TWIST LOCK
EWC	ELECTRIC WATER COOLER	TTB	TELEPHONE TERMINAL BOARD
EWH	ELECTRIC WATER HEATER	TYP	TYPICAL
GEC	GROUNDING ELECTRODE CONDUCTOR	UON	UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTER	WP	WEATHERPROOF
HID	HIGH INTENSITY DISCHARGE	WR	WEATHER RESISTANT

LEGEND NOTES:
1. MOUNTING HEIGHTS SHOWN ARE MAXIMUM/MINIMUM HANDICAPPED ACCESSIBILITY STANDARDS – THEY SHALL NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION
2. ALL MOUNTING HEIGHTS ARE TO CENTERLINE UON.
3. ALL SYMBOLS MAY NOT BE USED

PROJECT COORDINATION NOTES

1. BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF WORK. THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.

2. COORDINATE WITH OTHER TRADES FOR ITEMS IN THEIR SCOPE OF WORK WHICH WOULD REQUIRE ELECTRICAL WORK (DISCONNECTION/RECONNECTION, ETC.) AND ARE NOT INDICATED ON THE ELECTRICAL PLANS.

Property of Engineers

FRESH HEALTHY CAFE

ISSUE

No.	DATE	DESCRIPTION

DWG TITLE:

LEGEND AND SPECIFICATIONS

SHEET No.

E-0

LIGHTING PLAN GENERAL NOTES

A. REFER ARCHITECTURE SHEET FOR LIGHT FIXTURE SCHEDULE, MOUNTING AND FIXTURE LOCATION.

B. CONTRACTOR IS ADVISED THAT ADJUSTMENTS TO EMERGENCY AND EXIT LIGHT FIXTURE LOCATIONS/QUANTITIES MAY BE REQUIRED BY AHJ UPON FINAL INSPECTION.

C. ALL EMERGENCY AND EXIT LIGHT FIXTURES SHALL BE CONNECTED WITHOUT ANY CONTROL AND SHOULD BE ON DEDICATED CIRCUIT.

D. ALL EXTERIOR LIGHTS/SIGNS SHALL BE CONTROLLED VIA PHOTOCELL/TIME-CLOCK. E.C. SHALL PROVIDE ALL THE LIGHTING CONTROL COMPLYING WITH ASHRAE 90.1-2019 AND LOCAL AHJ REQUIREMENTS.

(#) LIGHTING PLAN KEY NOTES

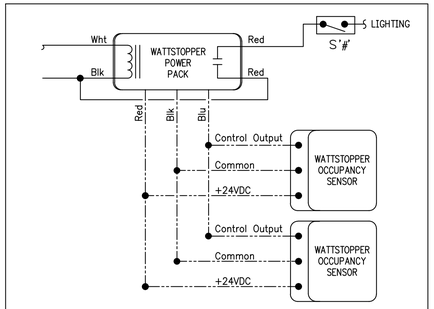
1. PROVIDE LOW VOLTAGE OCCUPANCY SENSOR EQUAL TO WATTSTOPPER DT-305. PROVIDE WATTSTOPPER BZ POWER PACK(S) AS REQUIRED. INTERCONNECT OCCUPANCY SENSORS SO THAT ANY SENSOR WILL TRIGGER ALL LIGHTS. SET OFF TIME FOR 30 MINUTES.
2. WALL MOUNTED OCCUPANCY SENSOR EQUAL TO WATTSTOPPER WS-250.SET OFF TIME TO 20 MINUTES FOR RESTROOM, SET DIP SWITCH TO AUTOMATIC ON.
3. WIRE ALL EMERGENCY & EXIT LIGHT TO THE DEDICATED CIRCUIT (B:1) FOR CONTINUOUS OPERATION.
4. DIMMER SWITCH BANK COORDINATE EXACT LOCATION WITH ARCHITECT / OWNER. DIMMER SWITCHES SHALL BE RATED FOR TOTAL LOAD OF SWITCHED CIRCUIT AND LAMP TYPE AS REQUIRED. DIMMERS SHALL BE PROVIDED WITH AN ON/OFF SWITCH.
5. LIGHTING NEAR ELECTRICAL PANELS SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPILED AS PER NEC 110.26(D).
6. ALL EXTERIOR SIGNAGE SHALL BE CONTROLLED WITH PHOTOCELL AND TIME CLOCK (TORX EWZ20IC). E.C. TO COORDINATE WITH OWNER FOR EXTERNAL LIGHTING CONTROL. BASE BID ACCORDINGLY.
7. E.C. SHALL COORDINATE EXACT MAKE/MODEL OF PHOTOCELL WITH EQUIPMENT MANUFACTURER. E.C. SHALL ADJUST PHOTOCELL QUANTITIES AS RECOMMENDED BY MANUFACTURER. BASE BID ACCORDINGLY.
8. SWITCH FOR CONTROL OF "STORE FRONT SIGN" OUTLET. E.C. TO COORDINATE EXACT LOCATION MAKE/MODEL OF SWITCH WITH ARCHITECT/OWNER IN COORDINATION WITH DEVICE MANUFACTURER IN FIELD. BASE BID ACCORDINGLY.

LIGHTING SCHEDULE

CODE	DESCRIPTION	MANUFACTURER	PRODUCT	REMARKS
		INTERIOR		
L1	2X2 LAY-IN LED LIGHT FIXTURE	LITHONIA	2VTL2-48L-ADP-GZI0-LP835 (4000 LUMENS)	
L2	2X2 LAY-IN LED LIGHT FIXTURE	LITHONIA	2VTL2-60L-ADP-GZI0-LP835 (5000 LUMENS)	
L3	PENDANT LED FIXTURE	ALCON LIGTING	12205 RLM 16" 2500 LUMENS 4000K COLOR WHITE	BOTTOM OF FIXTURE SET AT 7'-0" AFF
L4	6" RECESSED LED DOWNLIGHT	CREE	RC6/CR6T-1600L-35K	
L5	CHANDELIER	LUMENS	GK02496383	BOTTOM OF FIXTURE SET AT 10'-0" AFF
EBU-W	2-HEAD EMERGENCY BATTERY PACK (WHITE)	EXITRONIX	EBU-W-LED-51-52	
EX-1	COMBO LED EXIT SIGN W/LIGHT HEADS (WHITE)	EXITORNIX	VLED-U-WH-EL90	

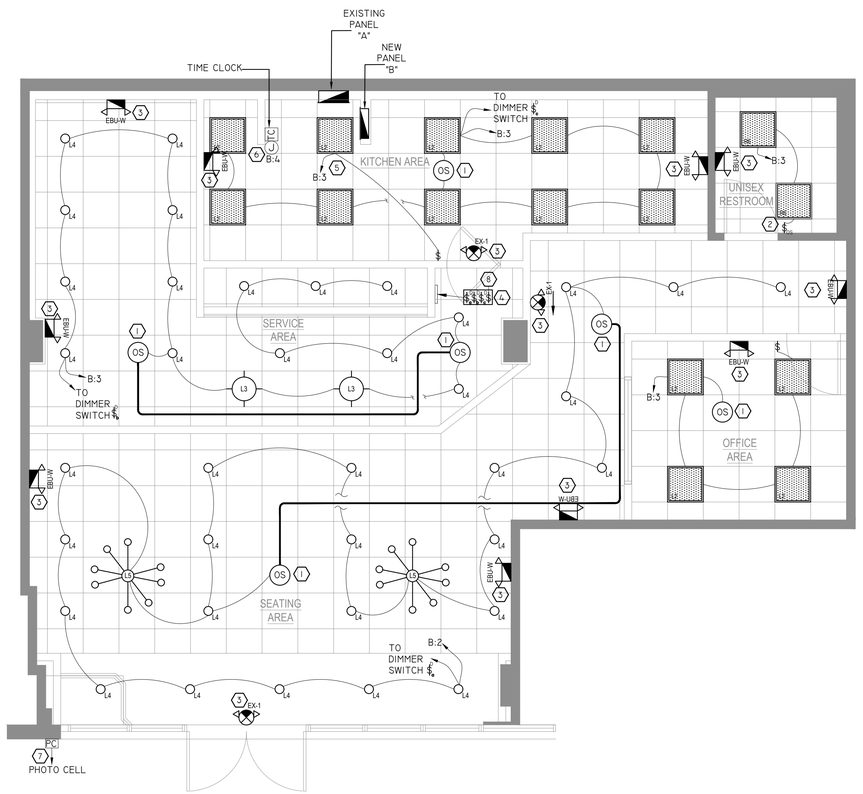
LIGHTING SCHEDULE NOTES

1. PROVIDE ALL FIXTURES COMPLETE WITH LAMPS & MOUNTING/HANGING HARDWARE.
2. PROVIDE HOLD-DOWN CLIPS FOR EACH CORNER OF LED 2X2 FIXTURE.
3. COORDINATE AND VARIFY ALL FIXTURE INFORMATION, TYPE AND FINAL LOCATIONS WITH THE REFLECTED CEILING PLAN.
4. LAMPS SHALL BE AS MANUFACTURED BY SYLVANIA, WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL.



OCCUPANCY SENSOR DETAIL

N.T.S.



G1 LIGHTING PLAN

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

Property of NY Engineers

FRESH HEALTHY CAFE

ISSUE		
No.	DATE	DESCRIPTION

DWG TITLE:

LIGHTING PLAN

SHEET No.

E-1

POWER GENERAL NOTES

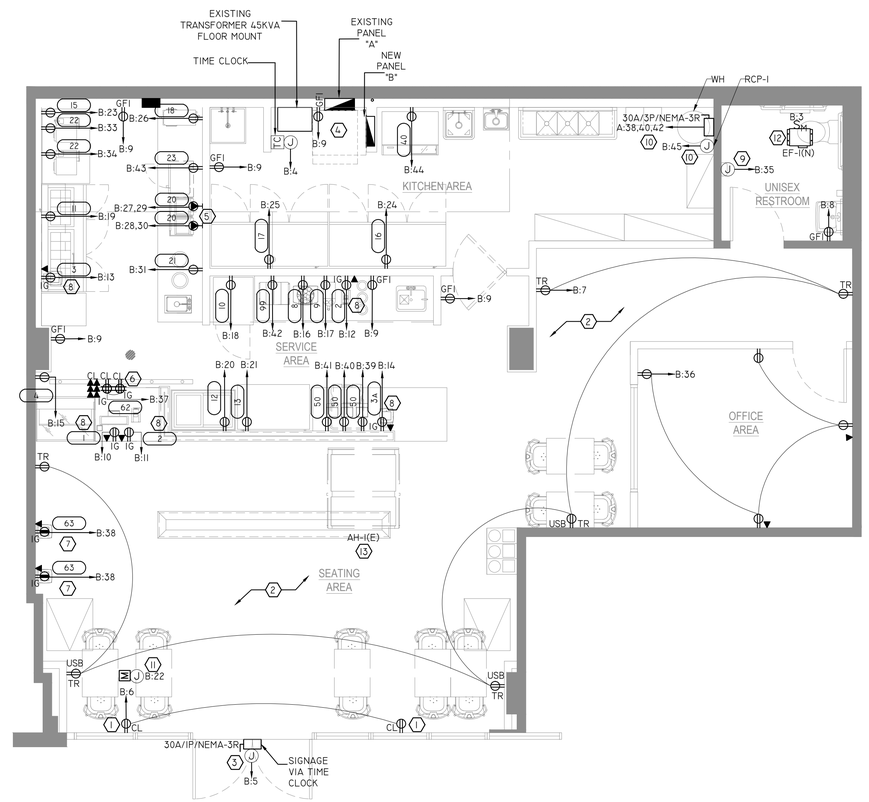
1. VERIFY LOCATION OF ALL EQUIPMENT WITH ARCHITECT, FRESH HEALTHY CAFE PROJECT MANAGER, AND OTHER TRADES.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL CONDITIONS AND IS ALSO RESPONSIBLE FOR REPORTING ANY CONFLICTS TO THE ENGINEER PRIOR TO THE START OF WORK.
3. DEVICES AND COVER PLATES SHALL BE COLOR COORDINATED WITH WALL FINISHES. COORDINATE ALL DEVICE/COVER PLATE COLORS WITH OWNER'S REPRESENTATIVE. COVER PLATES THAT ARE NOT METALLIC SHALL BE NYLON OR OTHER UNBREAKABLE TYPE MATERIAL.
4. COORDINATE LOCATION OF OUTLETS AND JACKS AT TV'S WITH EXACT EQUIPMENT LOCATION AND ELEVATION. SEE ARCHITECTURAL DRAWINGS COORDINATE ALL TV RELATED WORK WITH OWNER'S AUDIO/VIDEO CONTRACTOR.
5. REFER TO EQUIPMENT CATALOG SHEETS FOR EXACT REQUIREMENTS.
6. USE #10 WIRE FOR BRANCH CIRCUIT RUNS LONGER THAN 100 FT.
7. DUPLEX RECEPTACLES SHALL BE MOUNTED AT 18" AFF UNLESS NOTED OTHERWISE ON DRAWINGS OR SCHEDULES.
8. ALL BRANCH CIRCUITING SHALL BE 1/2" CONDUIT, 2#12 AND 1#12 GROUND UNLESS NOTED OTHERWISE.
9. WHERE DEVICES ARE SHOWN ON HALF WALLS ROUTE CONDUIT DOWN UNDER FLOOR OVER TO NEAREST FULL HEIGHT WALL AND RUN UP INTO CEILING STRUCTURE.
10. CONTRACTOR SHALL LABEL EACH RECEPTACLE WITH THE CIRCUIT NUMBER THAT SERVES IT. SEE SPECIFICATIONS.
11. ALL EXTERIOR WEATHERPROOF OUTLETS SHALL COMPLY WITH N.E.C. ARTICLE 406.4(D)(6) FOR WEATHER-RESISTANT RECEPTACLES.
12. ALL BRANCH CIRCUITRY SHALL BE CONSIDERED 2#12 PLUS 1#12GND IN EMT OR FMC, UNLESS NOTED OTHERWISE. METAL CLAD (N.E.C TYPE MC) CABLE SHALL BE ACCEPTABLE WHERE EXPOSED AND WHERE PERMITTED BY CODE. (ARMORED CABLE, N.E.C. TYPE AC IS NOT ACCEPTABLE). USE OF MC CABLE SHALL BE LIMITED TO LIGHTING AND EXPOSED RECEPTACLES. MC CABLE SHALL NOT EXCEED 10' IN LENGTH. ALL 120V CIRCUITRY SHALL HAVE DEDICATED NEUTRAL CONDUCTORS AND FULLY SIZED INSULATED GROUND CONDUCTORS, INCLUDING MC CABLE. MULTIPLE CIRCUITS IN A COMMON RACEWAY MAY SHARE A COMMON GROUND CONDUCTOR.
13. COORDINATE EXACT LOCATION OF HVAC EQUIPMENTS ON ABOVE CEILING WITH MECHANICAL CONTRACTOR.
14. E.C. SHALL COORDINATE OUTLET/DISCONNECT REQUIREMENT FOR MECHANICAL/PLUMBING UNIT WITH MECHANICAL/PLUMBING CONTRACTOR AND EQUIPMENT MANUFACTURER FOR FINAL SELECTION PRIOR TO ROUGH-IN.
15. FINAL CONDUIT/CABLE ROUTING SHALL BE DETERMINED IN-FIELD, AND PRIOR TO THE COMMENCEMENT OF WORK, COORDINATED WITH OTHER TRADE CONTRACTORS AND THE TENANT.
16. E.C. SHALL COORDINATE EXACT RECEPTACLE/OUTLET/DISCONNECT TYPE FOR EQUIPMENT WITH EQUIPMENT VENDOR/MANUFACTURER.
17. ALL 125-VOLT THROUGH 250-VOLT RECEPTALCES 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 LOCATED IN KITCHEN AND FOOD PREP AREAS SHALL BE GFCI PROTECTION PER THE N.E.C. SECTION 210.8B.
18. VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
19. ALL 120V, 1P 15 & 20 AMP RECEPTACLES IN THE KITCHEN AREA SHALL BE GFCI TYPE AND MOUNTED IN A READILY ACCESSIBLE LOCATION. READILY ACCESSIBLE IS DEFINED AS NOT HAVING TO MOVE ANY EQUIPMENT IN ORDER TO RESET OR TEST THE GFCI RECEPTACLE.
20. E.C. TO COORDINATE WITH OWNER REGARDING EXTERIOR SIGNAGE VOLTAGE/AMPACITY REQUIREMENTS BEFORE PURCHASING AND INSTALLING CONDUIT, WIRE AND CIRCUIT BREAKERS. COORDINATE CONTROL OF SIGNAGE WITH OWNER/TENANT.
21. E.C. SHALL PROVIDE AND INSTALL ALL DISCONNECT SWITCHES, RECEPTACLES, CONCEALED WIRING, ETC. TO KITCHEN EQUIPMENT AS REQUIRED. E.C. SHALL ALSO PROVIDE ALL CORDS, FITTINGS, BOXES, CORD GRIPS, PLUGS, CABLES, ETC. ON EQUIPMENT REQUIRING SUCH ITEMS.

(#) POWER PLAN KEY NOTES

1. E.C. TO INSTALL SHOW WINDOW RECEPTACLES AS PER THE NEW JERSEY UCC ELECTRICAL SUBCODE 2020 SECTION 210.62. COORDINATE EXACT LOCATION OF OUTLET IN FIELD WITH ARCHITECT/OWNER BEFORE COMMENCEMENT OF ANY WORK.
2. ALL RECEPTACLES IN THIS AREA SHALL BE TAMPER RESISTANCE AS PER NEW JERSEY UCC ELECTRICAL SUBCODE SECTION 406.12.
3. PROVIDE JUNCTION BOX WITH LOCAL TOGGLE SWITCH DISCONNECT LOCATED ABOVE ACCESSIBLE CEILING AND ASSOCIATED 120V, 1Ø, 20 AMP CIRCUIT(S) FOR SIGNAGE. FIELD VERIFY EXACT ROUGH-IN LOCATION. CIRCUIT THRU TIME CLOCK FOR AUTOMATIC ON/OFF CONTROL OF THE SAME.
4. E.C. SHALL FIELD VERIFY THAT ALL ELECTRICAL PANELS ARE UNOBSTRUCTED. THE AREA IN FRONT OF ELECTRICAL PANELS SHALL NOT BE USED FOR STORAGE. WORKING SPACE SHALL BE PROVIDED IN ACCORDANCE WITH THE NEW JERSEY UCC ELECTRICAL SUBCODE SECTION 110.26(A). ALSO, E.C. SHALL PROVIDE SIGNAGE AND FLOOR MARKINGS INDICATING THE CLEAR SPACE IN FRONT OF THE ELECTRICAL PANELS.
5. E.C. SHALL COORDINATE EXACT RECEPTACLE/OUTLET/DISCONNECT TYPE FOR EQUIPMENT WITH EQUIPMENT VENDOR/ MANUFACTURER BEFORE COMMENCEMENT OF WORK, MAKE POWER PROVISION ACCORDINGLY & BASE BID ACCORDINGLY.
6. TWO NUMBER OF QUAD RECEPTACLE AND DATA OUTLET FOR DESK MENU BOARD/TV MONITORS. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
7. POWER FOR FLOOR/WALL MOUNTED KIOSK. COORDINATE EXACT POWER REQUIREMENT WITH EQUIPMENT MANUFACTURER.
8. COORDINATE FINAL PLACEMENT OF ALL DEVICES WITH FRANCHISEE.
9. JUNCTION BOX FOR HAND DRYER. E.C. TO COORDINATE JUNCTION BOX AND ITS POWER DETAILS AS PER ADA REQUIREMENT.
10. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF "WH" & "RCP-1" IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.
11. E.C. TO COORDINATE EXACT POWER REQUIREMENT & FINAL LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.
12. EF-1(N) SHALL INTERLOCK WITH ROOM LIGHT. E.C SHALL COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
13. EXISTING DISCONNECTING MEANS & CIRCUIT FOR EXISTING AH-1(E) SHALL REMAIN AS IS. E.C. SHALL VERIFY OPERABLE CONDITION OF EXISTING DISCONNECTING MEANS AND CIRCUIT INCLUDING WIRE/CONDUIT/BREAKER IN FIELD REPLACE WITH NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

EQUIPMENT SCHEDULE

TAG	GENERAL EQUIPMENT INFORMATION		ELECTRICAL							
			LOAD				SUPPLIED W/ PLUG	RECEPT. SPEC. (NEMA)	HEIGHT A.F.F.	REMARKS
	QTY.	DESCRIPTION, MANUFACTURER & MODEL#	VOLTS	PHASE	AMPS	CIRCUIT SIZE				
1	1	POS "IPAD w/ Square Stand" & Cash Drawer	120	1		20	Y	5-20	24"	Outlet Located Inside of Millwork @ 24" a.f.f.
2	2	Square Smoothie printer / Station Printer	120	1		20	Y	5-20	24"	Outlet Located Inside of Millwork @ 24" a.f.f.
3	1	Kitchen Station Monitor	120	1		20	y	5-20	54"	
3.a	1	Expo Station Monitor	120	1		20	Y	5-20	24"	2 Ipads needed for stations
4	1	Open Merchandiser - SC-OS30E-3	115	1	12	20	Y	5-15	18"	Provide GFCI Circuit Breaker
8	1	Citrus Juicer - Zummo (Z1 Nature)	120	1	165 W	20	Y	5-20	44"	Green Model
9	1	Veggie Juicer - Ceado (ES-700)	120	1	800 W	20	Y	5-15	44"	Confirm Receptacle Config. w/ Equipment Supplied
10	1	Reach-In Refrigerator - IKON (IB27RG)	115	1	3	20	Y	5-15	18"	Provide GFCI Circuit Breaker
11	1	Sandwhich Table - IKON (ISPT2M)	115	1	4.3	20	Y	5-15	18"	Provide GFCI Circuit Breaker
12	1	Chest Freezer - Master-Bilt (MSF-43AN)	115	1	1.1	20	Y	5-15	18"	Provide GFCI Circuit Breaker
13	1	Worktop Cooler (Smoothie Fridge) - IKON (IUC48R)	115	1	3.0	20	Y	5-15	18"	Provide GFCI Circuit breaker
15	1	Cooler Base 48" - IKON (ICBR-50)	115	1	6.9	20	Y	5-15	18"	Provide GFCI Circuit Breaker
16	1	3 Door Reach-In Freezer - True (T-72F-HC)	115	1	14.0	20	Y	5-20	18"	Provide GFCI Circuit Breaker
17	1	3 Door Reach-In Fridge - True (T-72-HC)	115	1	6.9	20	Y	5-15	18"	Provide GFCI Circuit Breaker
18	1	Coffe/Iced Tea Brewer - BUNN (ITCB-DV-HV)	120	1	14	20	Y	5-20	44"	Provide GFCI Circuit Breaker
20	1	Panini Grill Duo - Waring (WPG250TB)	208	1	2.8KW	20	Y	5-20	44"	Provide GFCI Circuit Breaker
21	1	Soup Warmer - Vollrath (72040)	120	1	9.2	20	Y	5-15	44"	Provide GFCI Circuit Breaker
22	2	Counter Top Steamer - Antunes (DFW-250)	120	1	15	20	Y	5-15	48"	Provide GFCI circuit breaker
23	1	Microwave - Amana (RMS10TS)	120	1	13	20	Y	5-15	44"	Provide GFCI Circuit Breaker
40	1	Ice Flaker w/Bin - HOSHIZAKI (F-300BAJ)	115	1	7.8	20	Y	5-15	18"	Provide GFCI Circuit Breaket
50	3	Blender - BLENDTEC (SNBS2C2901-B1L)	120	1	1800W	20	Y	5-15	44"	Provide GFCI Circuit Breaker
61	5	TV Monitors								Locally Sourced
63	2	Self-Serve Kiosk - Square								Coordinate Power & Data Requirments w/ Manufacturer
99	1	Beverage Dispenser - Simplicity Bubbler Mini-Quad (CS-4E-16)	120	1	3.6	20		5-15	48"	PROVIDE GFCI CIRCUIT BREAKER



G1 ELECTRICAL POWER PLAN

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

Property of NY Engineers

FRESH HEALTHY CAFE

ISSUE		
No.	DATE	DESCRIPTION

DWG TITLE:

ELECTRICAL POWER PLAN

SHEET No.

E-2

PANEL: A (EXISTING) (1) — **MOUNTING:** RECESSED

277/480 VOLTS, 3 PHASE, 4 WIRE — **PANEL LOCATION:** KITCHEN AREA

MAIN CB: 225A — **MLO:** NA — **BUS:** 225A MIN, — **FED FROM:** EXISTING ELECTRICAL SERVICE

NOTE:

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			O	9.65	EXISTING	21.85			EXISTING	12.19	H			2
3	3P-70	TRANSFORMER(EX)	O	14.01			26.20			12.19	H	AH-1(E)	3P-50	4
5			O	12.01				24.20		12.19	H			6
7						4.43				4.43	H			8
9	3P-20	SPARE					4.43		EXISTING	4.43	H	CU-1(E)	3P-25	10
11								4.43		4.43	H			12
13	20	SPARE				0.00						SPARE	20	14
15	20	SPARE					0.00					SPARE	20	16
17	20	SPARE						0.00				SPACE		18
19		SPACE				0.00						SPACE		20
21		SPACE					0.00					SPACE		22
23		SPACE						0.00				SPACE		24
25		SPACE				0.00						SPACE		26
27		SPACE					0.00					SPACE		28
29		SPACE						0.00				SPACE		30
31		SPACE				0.00						SPACE		32
33		SPACE					0.00					SPACE		34
35		SPACE						0.00				SPACE		36
37		SPACE				6.24				6.24	O			38
39		SPACE					6.24		3#10, 1#10, 3/4"C	6.24	O	WATER HEATER (WH)	#3P-30	40
41		SPACE						6.24		6.24	O			42
						32.52	**36.87**	**34.87**						

LOAD CLASSIFICATION		CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
TOTAL LIGHTING	L	0.00	125%	0.00
TOTAL RECEPTACLE	R	0.00	100%	0.00
TOTAL HVAC	H	49.88	100%	49.88
TOTAL MOTOR	M	0.00	100%	0.00
TOTAL KITCHEN/EQUIPMENTS	E	0.00	65%	0.00
TOTAL OTHER/MISCILLANEOUS	O	18.71	100%	18.71

PANEL TOTAL LOAD	
TOTAL CONNECTED LOAD	104.26 KVA
TOTAL DEMAND LOAD	96.25 KVA
TOTAL CONNECTED CURRENT	125.55 AMP
TOTAL DEMAND CURRENT	115.91 AMP
SYSTEM VOLTAGE	120/208 Wye

PANEL: B (NEW) — **MOUNTING:** RECESSED

120/208 VOLTS, 3 PHASE, 4 WIRE — **PANEL LOCATION:** KITCHEN AREA

MAIN CB: 125A — **MLO:** NA — **BUS:** 125A MIN, — **FED FROM:** EXISTING PANEL-A

NOTE:

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	LIGHTING-EMERGENCY & EXIT	L	0.30	2#12, 1#12, 3/4"C	0.85			2#12, 1#12, 3/4"C	0.55	L	LIGHTING-SEATING AREA AND HALLWAY	20	2
3	20	LIGHTING-SERVICE AREA, KITCHEN AREA, OFFICE AREA RESTROOM+ EF-1(N)	L	0.86	2#12, 1#12, 3/4"C		1.16		2#12, 1#12, 3/4"C	0.30	L	TIME CLOCK	20	4
5	20	EXTERIOR SIGNAGE	L	1.20	2#12, 1#12, 3/4"C			2.40	2#12, 1#12, 3/4"C	1.20	L	SHOW WINDOW RECEPTACLE	20	6
7	20	SEATING AREA GENERAL RECEPTACLE	R	1.08	2#12, 1#12, 3/4"C	1.26			2#12, 1#12, 3/4"C	0.18	R	RESTROOM RECEPTACLE	20	8
9	20	KITCHEN AREA GENERAL RECEPTACLE	R	0.72	2#12, 1#12, 3/4"C		0.90		2#12, 1#12, 3/4"C	0.18	E	1_POS "IPAD W/ SQUARE STAND" & CASH DRAWER	20*	10
11	20*	2_SQUARE SMOOTHIE PRINTER / STATION PRINTER	E	0.18	2#12, 1#12, 3/4"C			0.36	2#12, 1#12, 3/4"C	0.18	E	2_SQUARE SMOOTHIE PRINTER / STATION PRINTER	20*	12
13	20*	3_KITCHEN STATION MONITOR	E	0.18	2#12, 1#12, 3/4"C	0.36			2#12, 1#12, 3/4"C	0.18	E	3a_EXPO STATION MONITOR	20*	14
15	20*	4_OPEN MERCHANDISER - ELPRRS33	E	0.48	2#12, 1#12, 3/4"C		0.65		2#12, 1#12, 3/4"C	0.17	E	8_CITRUS JUICER - ZUMMO (Z1 NATURE)	20*	16
17	20*	9_VEGGIE JUICER - CEADO (ES-700)	E	0.80	2#12, 1#12, 3/4"C			1.15	2#12, 1#12, 3/4"C	0.35	E	10_REACH-IN REFRIGERATOR	20*	18
19	20*	11_SANDWHICH TABLE	E	0.49	2#12, 1#12, 3/4"C	0.62			2#12, 1#12, 3/4"C	0.13	E	12_CHEST FREEZER	20*	20
21	20*	13_WORKTOP COOLER	E	0.35	2#12, 1#12, 3/4"C		0.85		2#12, 1#12, 3/4"C	0.50	M	MOTORISED DAMPER	20	22
23	20*	15_COOLER BASE 48"	E	0.24	2#12, 1#12, 3/4"C			1.85	2#12, 1#12, 3/4"C	1.61	E	16_3 DOOR REACH-IN FREEZER	20*	24
25	20*	17_3 DOOR REACH-IN FRIGDE	E	0.79	2#12, 1#12, 3/4"C	2.47			2#12, 1#12, 3/4"C	1.68	E	18_COFFE/ICED TEA BREWER	20*	26
27	2P-20*	20_PANINI GRILL DUO	E	1.40	2#12, 1#12, 3/4"C		2.80		2#12, 1#12, 3/4"C	1.40	E	20_PANINI GRILL DUO	2P-20*	28
29			E	1.40				2.80		1.40	E			30
31	20*	21_SOUP WARMER	E	0.55	2#12, 1#12, 3/4"C	0.55						SPARE	20	32
33	20*	22_COUNTER TOP STEAMER	E	1.80	2#12, 1#12, 3/4"C		3.60		2#12, 1#12, 3/4"C	1.80	E	22_COUNTER TOP STEAMER	20*	34
35	20**	RESTROOM HAND DRYER	O	0.50	2#12, 1#12, 3/4"C			1.22	2#12, 1#12, 3/4"C	0.72	R	OFFICE AREA GENERAL RECEPTACLE	20	36
37	20	62_MENU BOARD/TV MONITOR	R	0.72	2#12, 1#12, 3/4"C	1.08			2#12, 1#12, 3/4"C	0.36	R	63_SELF-SERVE KIOSK	20	38
39	20*	50_BLENDER	E	1.80	2#12, 1#12, 3/4"C		3.60		2#12, 1#12, 3/4"C	1.80	E	50_BLENDER	20*	40
41	20*	50_BLENDER	E	1.80	2#12, 1#12, 3/4"C			2.23	2#12, 1#12, 3/4"C	0.43	E	99_BEVERAGE DISPENSER	20*	42
43	20*	23_MICROWAVE	E	1.56	2#12, 1#12, 3/4"C	2.46			2#12, 1#12, 3/4"C	0.90	E	40_ICE FLAKER	20*	44
45	20	RCP-1	M	0.46	2#12, 1#12, 3/4"C		0.46					SPARE	20	46
47	20	SPARE						0.00				SPARE	20	48
49	20	SPARE				0.00						SPARE	20	50
51	20	SPARE					0.00					SPARE	20	52
53	20	SPARE						0.00				SPARE	20	54
					TOTAL CONNECTED LOAD (KVA)	**9.65**	**14.01**	**12.01**						

LOAD CLASSIFICATION		CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
TOTAL LIGHTING	L	4.41	125%	5.51
TOTAL RECEPTACLE	R	3.78	100%	3.78
TOTAL HVAC	H	0.00	100%	0.00
TOTAL MOTOR	M	0.96	100%	0.96
TOTAL KITCHEN/EQUIPMENTS	E	26.02	65%	16.91
TOTAL OTHER/MISCILLANEOUS	O	0.50	100%	0.50

PANEL TOTAL LOAD	
TOTAL CONNECTED LOAD	35.67 KVA
TOTAL DEMAND LOAD	27.66 KVA
TOTAL CONNECTED CURRENT	99.12 AMP
TOTAL DEMAND CURRENT	76.88 AMP
SYSTEM VOLTAGE	120/208 Wye

PANEL SCHEDULE GENERAL NOTES:

1. E.C. SHALL COORDINATE EXACT POWER AND ELECTRICAL OUTLET/DISCONNECT REQUIREMENT FOR MECHANICAL/PLUMBING EQUIPMENT WITH EQUIPMENT MANUFACTURER IN COORDINATION WITH ARCHITECT/OWNER IN THE FIELD PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
2. E.C. SHALL COORDINATE WITH ALL EQUIPMENT MANUFACTURER/SUPPLIER/ARCHITECT/ OWNER FOR THE EXACT ELECTRICAL REQUIREMENTS AND ACCORDINGLY PROVIDE THE BREAKER, CABLE AND CONDUIT ACCORDINGLY. BASE BID ACCORDINGLY.
3. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER/LV CONSULTANT FOR POWER AND ELECTRICAL REQUIREMENTS FOR THE LOW VOLTAGE AND SECURITY SYSTEM IN FIELD AND ACCORDINGLY PROVIDE THE ELECTRICAL CONNECTIONS/CIRCUITS FROM SPARE CIRCUITS FOR LOW VOLTAGE SYSTEM PER REQUIREMENTS. BASE BID ACCORDINGLY.

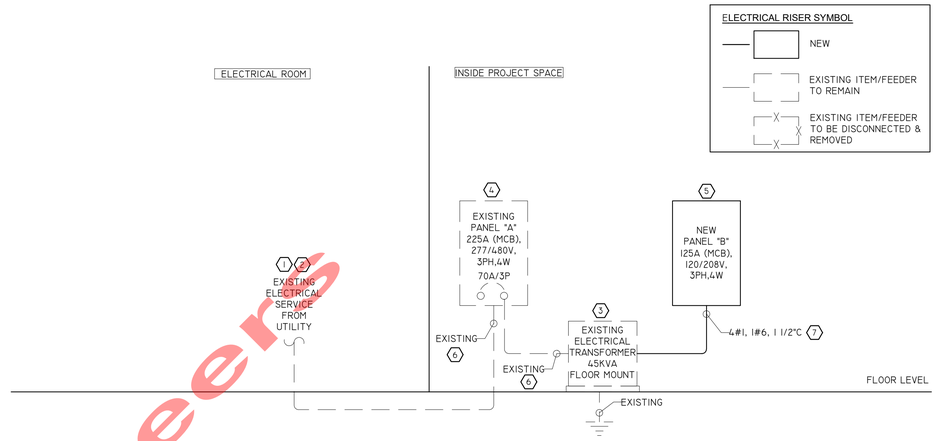
(#) PANEL SCHEDULE KEY NOTES

1. E.C. SHALL VERIFY EXACT RATING OPERABLE CONDITION OF EXISTING BREAKER AND CONDUCTORS. REPLACE WITH NEW AS SHOWN IF FOUND INOPERABLE. INFORM ENGINEER FOR ANY DISCREPANCY FOUND. BASE BID ACCORDINGLY.

PANEL SCHEDULE ABBREVIATIONS :
EX = EXISTING
N = NEW
L = LIGHTING
R = RECEPTACLE
H = HVAC
E = EQUIPMENT
M = MOTOR
O = OTHER
* = NEW GFI BREAKER
** = LOCK ON TYPE BREAKER
# = NEW BREAKER

A1 ELECTRICAL PANEL SCHEDULE

N.T.S.



K9 ELECTRICAL RISER DIAGRAM

N.T.S.

RISER DIAGRAM GENERAL NOTES

1. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSE ONLY.
2. E.C. TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO BID.
3. E.C. SHALL VERIFY THE RATING, SIZE, LOCATION AND OPERABLE CONDITION OF ALL THE EXISTING PANELS AND ELECTRICAL CONNECTION IN FIELD. INFORM ENGINEER FOR ANY DISCREPANCY FOUND BEFORE COMMENCING ANY WORK.

(#) RISER DIAGRAM KEY NOTES

1. EXISTING 200A, 277/480V, 3-PHASE, 4-WIRE, ELECTRICAL SERVICE FROM THE UTILITY COMPANY SHALL REMAIN AS IS. E.C. SHALL COORDINATE WITH LANDLORD/UTILITY COMPANY FOR EXACT POWER DISTRIBUTION. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
2. EXISTING ELECTRICAL METER & FUSED DISCONNECT/BREAKER OF 200A, 277/480V, 3-PHASE, 4-WIRE FROM EXISTING ELECTRICAL ROOM FOR THE PROJECT SPACE SHALL REMAIN AS IT IS. E.C. SHALL VERIFY EXACT LOCATION & OPERABLE CONDITION OF EXISTING METER & DISCONNECT/BREAKER IN FIELD WITH ARCHITECT / LANDLORD, REPLACE WITH NEW IF FOUND INOPERABLE. INFORM THE ENGINEER ON RECORD FOR ANY DISCREPANCIES PRIOR TO COMMENCING ANY WORK.
3. EXISTING 45KVA, 3-PHASE, DRY TYPE DISTRIBUTION TRANSFORMER, FLOOR MOUNT, PRIMARY 277/480V AND SECONDARY 120/208V SHALL REMAIN. THE ELECTRICAL CONTRACTOR (E.C.) IS REQUIRED TO FIELD VERIFY THE EXACT SIZE, LOCATION AND OPERABLE CONDITION OF THE EXISTING TRANSFORMER. IF THE EXISTING TRANSFORMER IS FOUND TO BE INOPERABLE, IT MUST BE REPLACED WITH NEW. INFORM ENGINEER ON RECORD IN CASE OF ANY DISCREPANCY FOUND WITH SITE CONDITION. BASE BID ACCORDINGLY.
4. EXISTING 225A (MCB), 277/480V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" SHALL REMAIN. THE ELECTRICAL CONTRACTOR (E.C.) IS REQUIRED TO FIELD VERIFY THE EXACT SIZE, LOCATION AND OPERABLE CONDITION OF THE PANEL "A". IF THE PANEL IS FOUND TO BE INOPERABLE, IT MUST BE REPLACED WITH NEW. INFORM ENGINEER ON RECORD IN CASE OF ANY DISCREPANCY FOUND WITH SITE CONDITION. BASE BID ACCORDINGLY.
5. NEW 125A (MCB), 120/208V, 3-PHASE , 4-WIRE ELECTRICAL PANEL "B" FOR PROJECT SPACE. E.C. SHALL COORDINATE WITH THE ARCHITECT/OWNER FOR THE EXACT LOCATION IN THE FIELD. BASE BID ACCORDINGLY.
6. EXISTING ELECTRICAL FEEDER SHALL REMAIN. E.C. TO VERIFY OPERABLE CONDITION OF INCOMING FEEDER IN FIELD AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
7. E.C. TO FIELD VERIFY EXACT LENGTH OF THE CABLE AND CHECK THE VOLTAGE DROP IS UNDER LIMIT PER NEC BEFORE INSTALLATION. E.C. SHALL PROVIDE THE UPDATED WIRE/FEEDER SIZE AS NEEDED AS PER THE VOLTAGE DROP CALCULATION. BASE BID ACCORDINGLY.

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FRESH HEALTHY CAFE

ISSUE

No.	DATE	DESCRIPTION

DWG TITLE:

ELECTRICAL RISER DIAGRAM, PANEL SCHEDULE

SHEET No.

E-3

GENERAL NOTES:

A. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.

B. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.

C. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.

D. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL TRADES PRIOR TO INSTALLATION.

E. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THESE DRAWINGS UNLESS OTHERWISE NOTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND/OR INSTALLATION.

F. ALL ROOF PENETRATIONS SHALL BE AT THE CONTRACTOR'S EXPENSE. COORDINATE WITH OWNER'S ROOFING CONTRACTOR SO AS NOT TO AVOID ANY EXISTING ROOF WARRANTIES.

G. THE ENTIRE INSTALLATION SHALL BE GUARANTEED FREE OF DEFECTS AND CONTRACTOR SHALL REPAIR AND / OR REPLACE ANY DEFECTIVE MATERIALS OR EQUIPMENT AT NO COST TO THE OWNER FOR A MINIMUM PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY ARCHITECT OR ENGINEER.

H. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

I. ALL KITCHEN, PREP AREA AND SALES AREA EQUIPMENT WILL BE FURNISHED AND INSTALLED. EQUIPMENT WILL BE FURNISHED WITH TRIM, FAUCETS, ESCUTCHEONS, ETC. PLUMBING CONTRACTOR SHALL PROVIDE ALL ROUGH-IN TRAPS AND MAKE ALL FINAL CONNECTIONS (SEE EQUIPMENT SCHEDULE).

J. ALL PIPING TO BE CONCEALED IN HUNG CEILINGS, CHASES AND FURRED SPACES.

K. REFER TO EQUIPMENT SCHEDULE AND EQUIPMENT SPECIFICATIONS FOR EXACT LOCATIONS OF PLUMBING CONNECTIONS.

L. THE CONTRACTOR SHALL VERIFY DEPTH, SIZE, LOCATION OF ALL EXISTING UTILITIES IN FIELD PRIOR TO STARTING WORK.

M. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL PIPE HANGERS, AND SUPPORTS IN ACCORDANCE WITH THE LOCAL APPLICABLE CODES.

N. THE CONTRACTOR TO PROVIDE TRAP PRIMERS, DEEP SEAL TRAP OR TRAP SEAL ON ALL FLOOR DRAINS AS PER APPLICABLE CODE.

O. ALL PENETRATIONS REQUIRED FOR PLUMBING EQUIPMENT AND PIPING THROUGH ANY WALL SHALL BE PROPERLY SEALED OFF TO MAINTAIN THE INTEGRITY OF THE STRUCTURE.

P. ALL SHUT OFF AND ISOLATION VALVES SHALL BE BALL TYPE. ALL BALL VALVES SHALL BE INSTALLED VERTICALLY.

Q. PROVIDE AN INDIVIDUAL BALL VALVE AND BACK CHECK VALVE TO EACH INDIVIDUAL PIECE OF EQUIPMENT.

R. PROVIDE ASSE 1022 BACKFLOW PREVENTER AT ALL COFFEE MAKERS, ISLAND OASIS, ESPRESSO MACHINE, SH BREWER. ASSE 1024 BACKFLOW PREVENTER AT WATER FILTER AND OVEN AND ASSE 1012 AT ICE MAKER AND ALL OTHER EQUIPMENT AS REQUIRED BY CODE.

S. PROVIDE AERATORS ON ALL HAND SINKS AND LAVATORIES THROUGHOUT THE FACILITY.

T. EVERY DRY VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN 6 INCHES ABOVE THE FLOOD LEVEL RIM OF THE HIGHEST TRAP OR TRAPPED FIXTURE BEING VENTED.

U. PROVIDE KAY CHEMICAL DISPENSER (SEE NATIONAL ACCOUNTS) AT MOP SINK AND THREE COMP SINK. MOUNT BOTTLE AND DISPENSER ABOVE SINK AS REQUIRED BY CHEMICAL SUPPLIER.

V. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE NOT LESS THAN TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.

W. PRV SHOULD BE INSTALLED WHERE WATER PRESSURE WITHIN A BUILDING EXCEEDS 80 PSI AS PER 2021 NSPC. PROVIDE INDIVIDUAL PRV FOR EQUIPMENT AS PER REQUIREMENT.

PLUMBING LEGENDS:

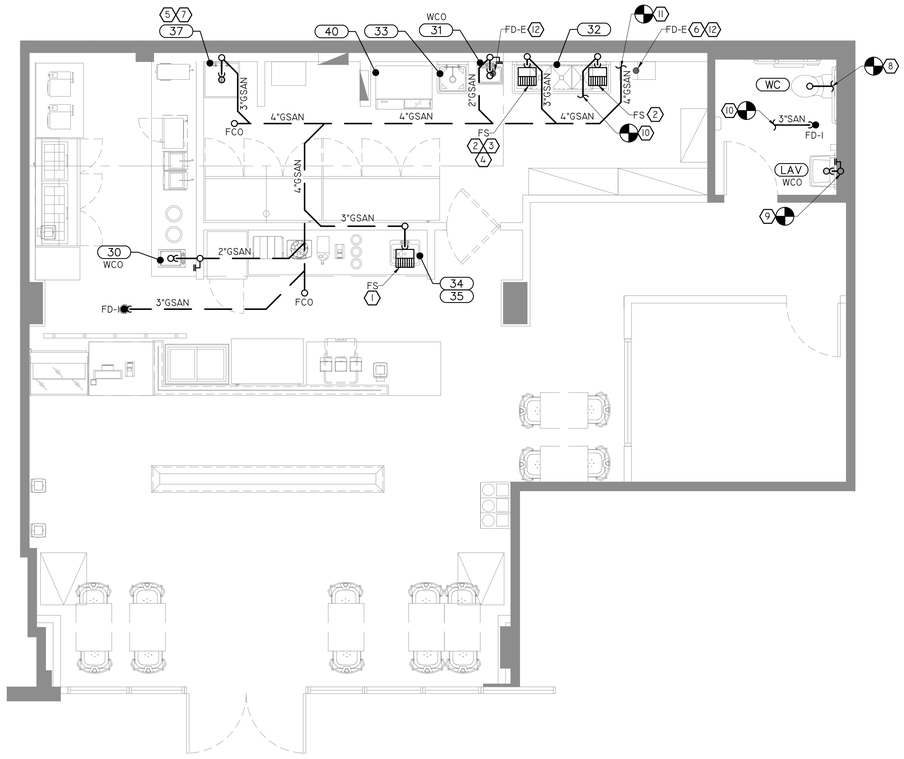
DESCRIPTION	ABBREV.	SYMBOL
SANITARY WASTE PIPING	SAN	SAN
GREASE WASTE PIPING	GSAN	GSAN
VENT PIPING	V	
GAS PIPING		G
GAS SHUT-OFF VALVE		
CLEAN OUT TO GRADE	COTG	
WALL CLEAN OUT	WCO	WCO
COLD WATER PIPING	CW	
HOT WATER PIPING	HW	
HOT WATER RETURN	HWR	
FILTERED WATER PIPING	FW	
BALL VALVE	BV	
BACKFLOW PREVENTOR	BFP	OR
CAP		CAP
VENT THRU ROOF	VTR	
TEE UP		
TEE DOWN		
90° UP		
90° DOWN		
HUB DRAIN	HD	
FLOOR CLEAN OUT	FCO	FCO
GRADE CLEAN OUT	GCO	
BELOW FINISHED FLOOR	BFF	
POINT OF CONNECTION		
FLOOR DRAIN	FD	
FLOOR SINK	FS	
WATER CLOSET -HANDICAPPED	WC-HC	
LAVATORY -HANDICAPPED	LAV-HC	
PRESSURE REGULATING VALVE	PRV	
TRAP PRIMER	TP	

GREASE TRAP SIZING CALCULATIONS

FIXTURE	QUANTITY	DFU PER FIXTURE	TOTAL DFU
HAND SINK	2	2	4
MOP SINK	1	5	5
FLOOR DRAIN	1	5	5
FLOOR SINK	3	5	15
TOTAL DRAINAGE FIXTURE UNITS (DFU) CONNECTED TO GREASE INTERCEPTOR			29
SIZING AS PER 2021 NSPC (UPC TABLE 1014.3.6)			
REQUIRED CAPACITY OF GREASE INTERCEPTOR = 1,000 GALLONS.			
NOTE: CONTRACTOR TO MAKE SURE THE CAPACITY OF EXISTING GREASE INTERCEPTOR IS SUFFICIENT TO SERVE THE FRESH HEALTHY CAFE FACILITY.			

PLUMBING KEYED NOTES:

1. ROUTE INDIRECT WASTE FROM DUMP SINK TO FLOOR SINK WITH APPROVED AIR GAP.
2. ROUTE INDIRECT WASTE FROM 3 COMP. SINK TO FLOOR SINK WITH APPROVED AIR GAP.
3. ROUTE INDIRECT WASTE FROM VEGGIE SINK TO FLOOR SINK WITH APPROVED AIR GAP.
4. ROUTE INDIRECT WASTE FROM ICE FLAKER TO FLOOR SINK WITH APPROVED AIR GAP.
5. ROUTE INDIRECT WASTE FROM WATER FILTRATION SYSTEM TO MOP SINK WITH APPROVED AIR GAP.
6. ROUTE T&P RELIEF DRAIN TO EXISTING FLOOR DRAIN WITH APPROVED AIR GAP.
7. ROUTE INDIRECT WASTE FROM RPZ TO MOP SINK WITH APPROVED AIR GAP.
8. CONNECT NEW 3" SANITARY PIPING FROM WATER CLOSET TO EXISTING SANITARY PIPE CAPPED IN SPACE FOR WATER CLOSET. CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION AND INVERT OF EXISTING SANITARY PIPING ON SITE.
9. CONNECT NEW 2" SANITARY PIPING FROM LAVATORY TO EXISTING SANITARY PIPE CAPPED IN SPACE FOR LAVATORY. CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION AND INVERT OF EXISTING SANITARY PIPING ON SITE.
10. CONNECT NEW 3" SANITARY PIPING TO EXISTING SANITARY PIPING IN SPACE. CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION AND INVERT OF EXISTING SANITARY PIPING ON SITE.
11. CONNECT NEW 4" GREASE WASTE PIPING TO EXISTING GREASE WASTE PIPING BELOW SPACE CONNECTED TO EXISTING GREASE INTERCEPTOR. CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION AND INVERT OF EXISTING GREASE WASTE PIPING ON SITE.
12. EXISTING PLUMBING FIXTURES WITH EXISTING SANITARY AND VENT CONNECTION TO REMAIN. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE/UPGRADE IF REQUIRED.



K1 PLUMBING SANITARY PLAN

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

Property of NY Engineers

FRESH HEALTHY CAFE

ISSUE

No.	DATE	DESCRIPTION

DWG TITLE:

PLUMBING SANITARY PLAN

SHEET No.

P-1

ENERGY CONSERVATION NOTES:

1. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE RETARDANT, FACTORY-APPLIED JACKET. PROVIDE COLD WATER PIPING WITH FACTORY-APPLIED VAPOR BARRIER. INSULATION REQUIREMENT SHOULD COMPLY WITH ASHRAE 90.1 2019 SECTION ENERGY CONSERVATION CODE 7.4.3 BELOW TABLE.

MINIMUM PIPE INSULATION THICKNESS							
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU· IN./ (H· FT2· °F)	MEAN RATING TEMPERATURE, °F	<1	1 TO <1½	1½ TO <4	4 TO <8	>8
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

2. AS PER ASHRAE 90.1 2019 SECTION 7.4.4.1, TEMPERATURE CONTROLS SHALL BE PROVIDED THAT ALLOW FOR STORAGE TEMPERATURE ADJUSTMENT FROM 120° OR LOWER TO A MAXIMUM TEMPERATURE COMPATIBLE WITH THE INTENDED USE.
3. AS PER ASHRAE 90.1 2019 SECTION 7.4.4.2, SYSTEM DESIGNED TO MAINTAIN USAGE TEMPERATURE IN HOT WATER PIPES, SUCH AS RECIRCULATING HOT WATER SYSTEMS OR HEAT TRAPS, SHALL BE EQUIPED WITH AUTOMATIC TIME SWITCHES OR OTHER CONTROLS THAT CAN BE USED TO SWITCH THE USAGE TEMPERATURE MAINTAINANCE SYSTEM DURING EXTENDED PERIOD WHEN HOT WATER IS NOT REQUIRED.
4. AS PER ASHRAE 90.1 2019 SECTION 7.4.4.3, TEMPERATURE CONTROLLING MEANS SHALL BE PROVIDED TO LIMIT THE MAXIMUM TEMPERATURE OF WATER DELIVERED FROM LAVATORY FAUCETS IN PUBLIC FACILITY RESTROOMS TO 110°F.

CONTRACTOR NOTES:

IT IS RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT, LANDLORD OR TENANT OF ANY DISCREPANCIES ENCOUNTERED ON THE PLANS OR IN EXISTING SITE CONDITIONS PRIOR TO SUBMISSION OF BID.

BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK.

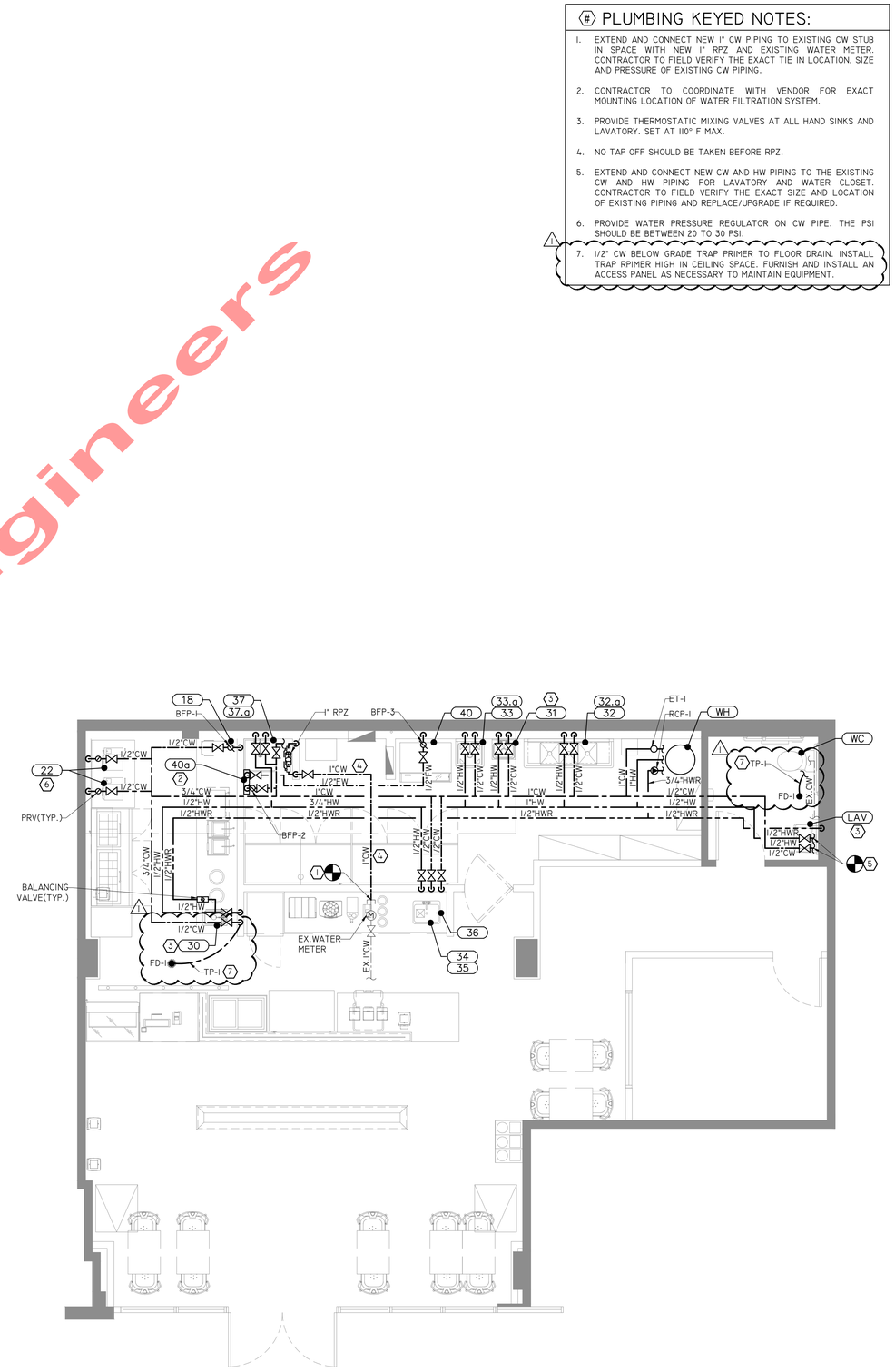
THE BASE BID SHALL REFLECT MODIFICATIONS TO SYSTEMS AND DEVICES AS REQUIRED BY STATE, LOCAL AND FEDERAL CODES WHETHER INDICATED OR NOT ON CONTRACT DOCUMENTS.

THE SUBMISSIONS OF A BID WILL BE EVIDENCE THAT SUCH AS EXAMINATION AND COMPLIANCE WITH THE GOVERNING CODES/REQUIREMENTS HAS BEEN MADE.

LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FOR SEEN HAD AND EXAMINATION AND CODE/REQUIREMENTS REVIEW BEEN MADE, WILL NOT BE ALLOWED.

(#) PLUMBING KEYED NOTES:

1. EXTEND AND CONNECT NEW 1" CW PIPING TO EXISTING CW STUB IN SPACE WITH NEW 1" RPZ AND EXISTING WATER METER. CONTRACTOR TO FIELD VERIFY THE EXACT TIE IN LOCATION, SIZE AND PRESSURE OF EXISTING CW PIPING.
2. CONTRACTOR TO COORDINATE WITH VENDOR FOR EXACT MOUNTING LOCATION OF WATER FILTRATION SYSTEM.
3. PROVIDE THERMOSTATIC MIXING VALVES AT ALL HAND SINKS AND LAVATORY. SET AT 110° F MAX.
4. NO TAP OFF SHOULD BE TAKEN BEFORE RPZ.
5. EXTEND AND CONNECT NEW CW AND HW PIPING TO THE EXISTING CW AND HW PIPING FOR LAVATORY AND WATER CLOSET. CONTRACTOR TO FIELD VERIFY THE EXACT SIZE AND LOCATION OF EXISTING PIPING AND REPLACE/UPGRADE IF REQUIRED.
6. PROVIDE WATER PRESSURE REGULATOR ON CW PIPE. THE PSI SHOULD BE BETWEEN 20 TO 30 PSI.
7. 1/2" CW BELOW GRADE TRAP PRIMER TO FLOOR DRAIN. INSTALL TRAP RPIMER HIGH IN CEILING SPACE. FURNISH AND INSTALL AN ACCESS PANEL AS NECESSARY TO MAINTAIN EQUIPMENT.



K1 PLUMBING WATER PLAN

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

Property of NY Engineers

FRESH HEALTHY CAFE

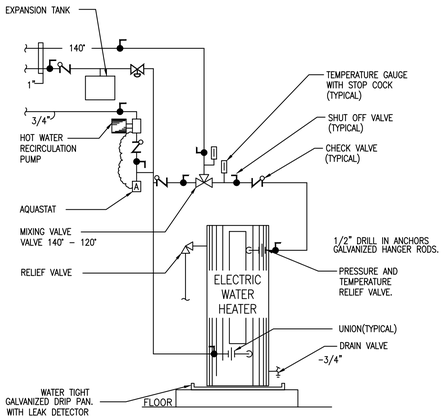
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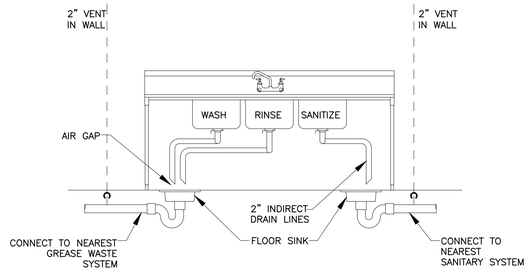
PLUMBING WATER PLAN

SHEET No.

P-1A



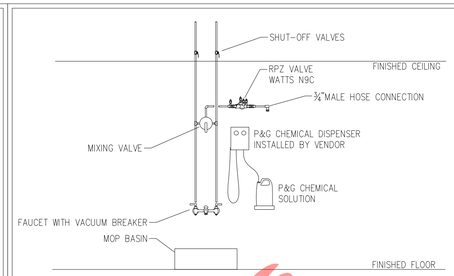
1	WATER HEATER DETAIL
N.T.S.	



COMMENTS:

1. COORDINATE INDIVIDUAL BAY DRAINAGE & AIR GAP WITH LOCAL CODE REQUIREMENTS.

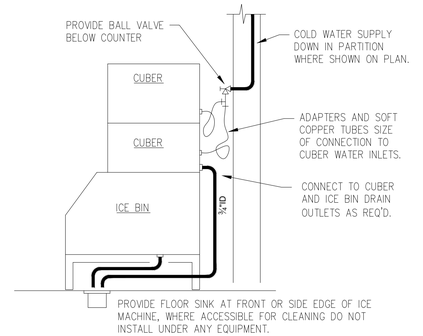
2	3 COMPARTMENT SINK DETAIL
N.T.S.	



COMMENTS:

1. EACH P&G CHEMICAL DISPENSER TIES DIRECTLY INTO THE WATER OFF THE FAUCET. IT MUST PROVIDE TEMPERED WATER (ADJUSTABLE FROM 60–120F) WITH A FLOW RATE OF 4 GPM AT 40 PSI DYNAMIC/FLOWING PRESSURE (35 PSID MIN.). THE HOT AND COLD WATER SUPPLY LINES MUST HAVE CHECK VALVES TO PREVENT HOT/COLD WATER CROSSOVER, IF THE TEMPERING VALVE DOES NOT INCLUDE THEM IT MUST INCLUDE A SHUTOFF VALVE TERMINATING IN A ¾" GARDEN HOSE MALE FITTING.

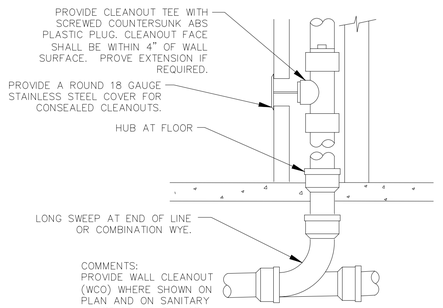
3	CHEMICAL SYSTEM AT MOP WASH
N.T.S.	



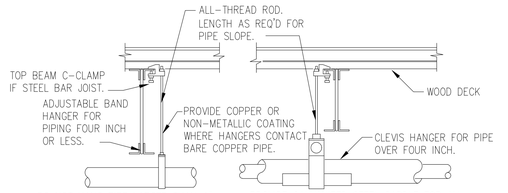
COMMENTS:

1. PROVIDE COLD WATER ROUGH-IN AT FRONT OF ICE MACHINE. ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT CONDITIONS. VERIFY CONNECTIONS WITH MANUFACTURER.
2. INSTALL WATER FILTERS PER MANUFACTURER'S INSTRUCTIONS.

4	ICE MACHINE PIPING SCHEMATIC
N.T.S.	



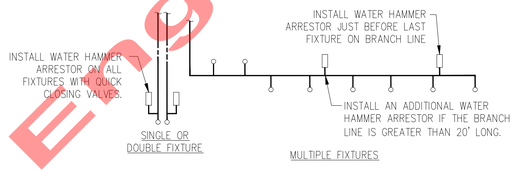
5	WALL CLEANOUT
N.T.S.	



COMMENTS:

1. PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER EXCEPT IN CHASES. TRAPEZE HANGERS MAY BE USED FOR MULTIPLE PARALLEL PIPES. SLOPE ALL WATER PIPING SLIGHTLY TOWARD DRAINABLE LOCATIONS. HANGER SPACING FOR PIPE SIZE: COPPER: 2"=9' 1½"=8' 1¼"=7' 1"=6' ¾"=6' ¾"=5'. CAST IRON: 10' AND ONE NEAR ALL JOINTS. STEEL: 3"=12' 2½"=11' 2"=10' 1 ½"=9' 1"=7' ¾"=6' ½"=5'. LOCATE HANGERS AS CLOSE AS POSSIBLE TO TURNS AND TEES OF PIPE. PROVIDE SUPPLEMENTARY STEEL STRUTS BETWEEN JOISTS IF REQUIRED. LOCATE HANGERS TO TAKE LOAD OFF OF EQUIPMENT CONNECTIONS. ANCHOR WATER PIPE AGAINST SWAYING DUE TO CHANGES IN WATER VELOCITY. PROVIDE SEISMIC BRACING AS REQUIRED BY LOCAL AUTHORITIES. CHAINS OR PERFORATED STRAP IRON OR STEEL IS NOT ACCEPTABLE. DO NOT SUSPEND PIPE FROM JOIST BRACING MEMBERS. REFER TO CODES AND SPECIFICATIONS FOR FURTHER INFORMATION.

6	PIPE HANGER DETAIL
N.T.S.	



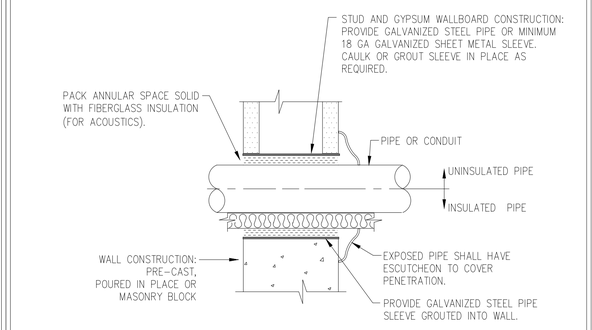
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1–11
B	3/4"	12–32
C	1"	33–60
D	1–1/4"	61–113
E	1–1/2"	114–154
F	2"	154–330

WATER SUPPLY FIXTURE UNIT (WSFU)		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	5	--
URINAL	4	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3

COMMENTS:

1. WATER HAMMER ARRESTERS SHALL BE HAVE PISTON AND O-RING CONSTRUCTION WITH PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. SIZE THE UNITS AS SHOWN PER THE TABLES SHOWN ABOVE.

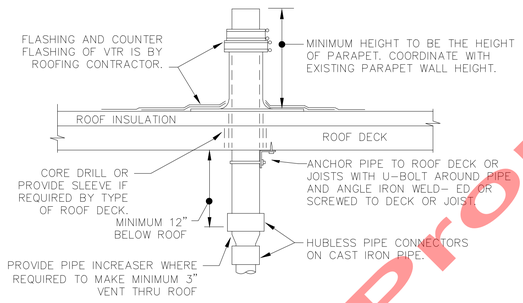
7	WATER HAMMER ARRESTER DETAIL
N.T.S.	



COMMENTS:

1. CENTER PIPE ALONG WITH THE INSULATION IN SLEEVE. CONTINUE THE INSULATION THRU THE SLEEVE.

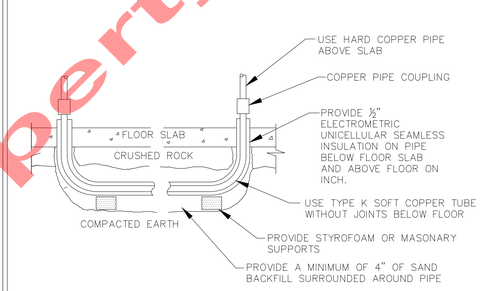
8	PIPE PENETRATION (NON-RATED WALL)
N.T.S.	



COMMENTS:

1. REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, OR TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, OR ONE FOOT FROM ANY VERTICAL SURFACE. LOCATE VTR MINIMUM 18" FROM PARAPET, EXPANSION JOINT, EQUIPMENT CURB, ETC. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS.

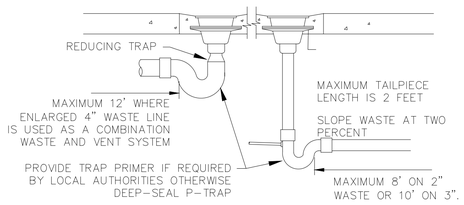
9	VENT THRU ROOF (VTR) DETAIL
N.T.S.	



COMMENTS:

1. REUSE EXISTING UNDERSLAB LINES WHERE POSSIBLE, SAW CUT FLOOR, EXCAVATE AS REQUIRED. INSTALL PIPING, REPAIR VAPOR BARRIER AND PATCH FLOOR AS REQUIRED.
2. PIPING TO HAVE LONG RADIUS TURNS WITH NO KINKS IN THE LINE.
3. THERE SHALL BE NO CONTACT OF COPPER PIPE WITH ANY OTHER PIPE, CONDUIT, OR REINFORCING STEEL.
4. SEPARATE HOT AND COLD WATER LINES BY 12" MINIMUM.

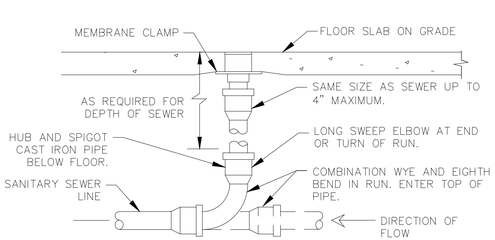
10	WATER PIPE UNDER SLAB
N.T.S.	



COMMENTS:

1. LOCATE FLOOR DRAIN/SINK WHERE SHOWN ON DIMENSIONED FLOOR PLAN. IF SITUATION IS FLOOR SLAB ON GRADE, SET DRAIN BODY IN PLACE, PROVIDE BACKFILL, AND POUR AROUND IT. RECESS TOP OF FLOOR DRAINS 1/2" BELOW FLOOR DATUM AND SLOPE FLOOR TO IT. DO NOT RECESS FLOOR SINKS.
2. OTHER VENTING METHODS MAY BE USED, IF APPROVED BY LOCAL CODE AND/OR LOCAL AUTHORITIES.

11	FLOOR DRAIN AND SINK DETAIL
N.T.S.	



COMMENTS:

1. LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND. CONSULT LOCAL CODES FOR OTHER FCO REQUIREMENTS.
2. ROUND SECURED GASKETED NICKEL BRONZE ADJUSTABLE TOP WITH "CO" CAST IN COVER. PROVIDE CLEANOUT TOP WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS). PROVIDE GASKETED PLASTIC PLUG IN CAST IRON BODY. USE TEFLON JOINT COMPOUND ON PLUG THREADS. CLEAN THE TOP OF EXPOSED FCO AFTER INSTALLATION.

12	FLOOR CLEANOUT DETAIL
N.T.S.	

PROPERTY OF KLNY Engineering

FRESH HEALTHY CAFE

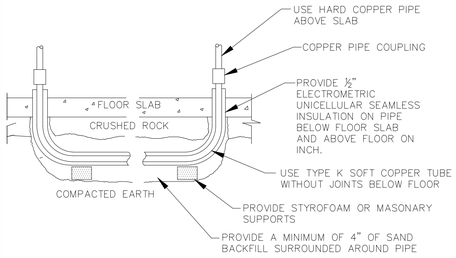
ISSUE		
No.	DATE	DESCRIPTION

DWG TITLE:

PLUMBING DETAILS

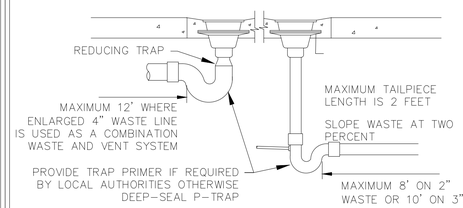
SHEET No.

P-2



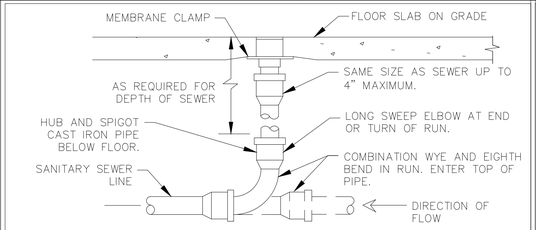
COMMENTS:
1. REUSE EXISTING UNDERSLAB LINES WHERE POSSIBLE, SAW CUT FLOOR, EXCAVATE AS REQUIRED. INSTALL PIPING, REPAIR VAPOR BARRIER AND PATCH FLOOR AS REQUIRED.
2. PIPING TO HAVE LONG RADIUS TURNS WITH NO KINKS IN THE LINE.
3. THERE SHALL BE NO CONTACT OF COPPER PIPE WITH ANY OTHER PIPE, CONDUIT, OR REINFORCING STEEL.
4. SEPARATE HOT AND COLD WATER LINES BY 12" MINIMUM.

1 WATER PIPE UNDER SLAB
N.T.S.



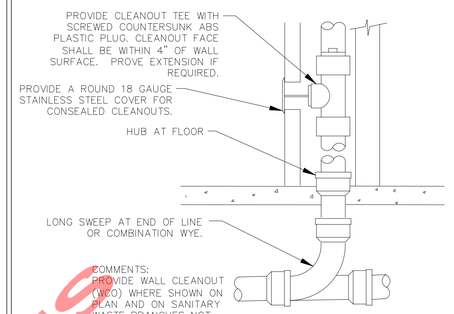
COMMENTS:
1. LOCATE FLOOR DRAIN/SINK WHERE SHOWN ON DIMENSIONED FLOOR PLAN. IF SITUATION IS FLOOR SLAB ON GRADE, SET DRAIN BODY IN PLACE, PROVIDE BACKFILL, AND POUR AROUND IT. RECESS TOP OF FLOOR DRAINS 1/2" BELOW FLOOR DATUM AND SLOPE FLOOR TO IT. DO NOT RECESS FLOOR SINKS.
2. OTHER VENTING METHODS MAY BE USED, IF APPROVED BY LOCAL CODE AND/OR LOCAL AUTHORITIES.

2 FLOOR DRAIN AND SINK DETAIL
N.T.S.

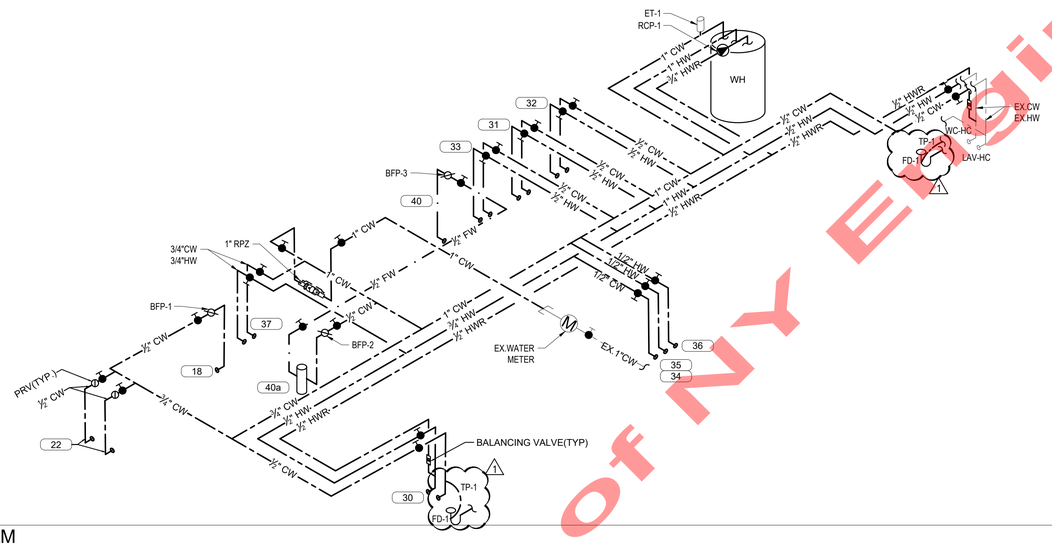


COMMENTS:
1. LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND/OR WHERE SHOWN ON PLANS. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND. CONSULT LOCAL CODES FOR OTHER FCO REQUIREMENTS.
2. ROUND SECURED GASKETED NICKEL BRONZE ADJUSTABLE TOP WITH "CO" CAST IN COVER. PROVIDE CLEANOUT TOP WITH VARIATIONS SUITABLE FOR FLOOR COVERING (CARPET MARKER, RECESSED FOR TILE, SCORIATED FOR UNFINISHED FLOORS). PROVIDE GASKETED PLASTIC PLUG IN CAST IRON BODY. USE TEFLON JOINT COMPOUND ON PLUG THREADS. CLEAN THE TOP OF EXPOSED FCO AFTER INSTALLATION.

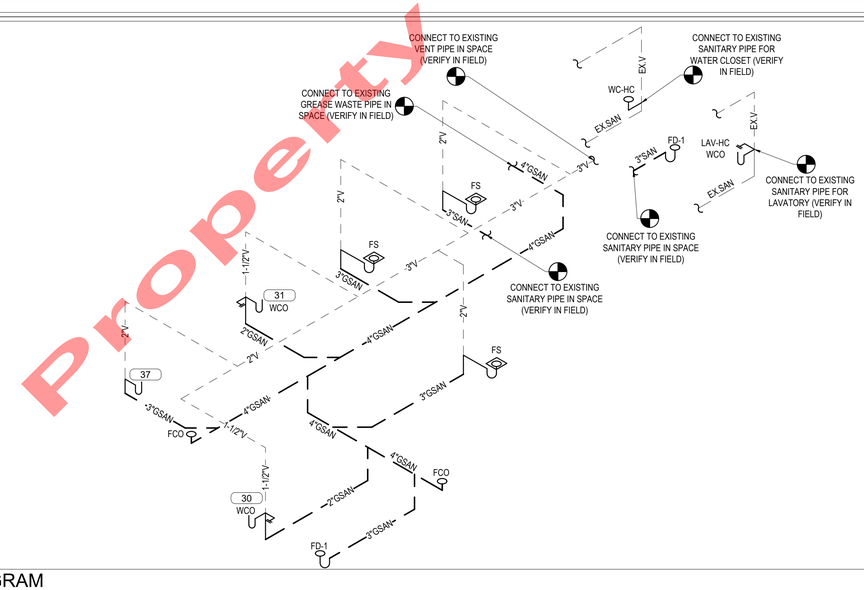
3 FLOOR CLEANOUT DETAIL
N.T.S.



4 WALL CLEANOUT
N.T.S.



5 WATER RISER DAIGRAM
N.T.S.



6 SANITARY ISOMETRIC RISER DIAGRAM
N.T.S.

PLUMBING FIXTURE SCHEDULE:

WC-HC: WATER CLOSET – AMERICAN STANDARD CADET FLOWISE RIGHTHEIGHT ELONGATED. PRESSURE ASSIST 1.1GPF #2467.00(LEFT TRIP) #2467.XXX(RIGHT TRIP),PROVIDE WITH LOCKABLE LID.

LAV-HC: LAVATORY –WALL MOUNTED LAVATORY ,LUCERNE BY AMERICAN STANDARD #0355.012 WITH AUTOMATIC FAUCET(STANDARD): SLOAN #ETF-600-B-BDT, W/TRANSFORMER #EL-154 AND 0.5GPM AERATOR #ETEF-1024-A

#18: COFFE/ICED TEA BREWER – BUNN (ITCB-DV-HV)

#22: COUNTER TOP STEAMER – ANTUNES DFW250

#30: HAND SINK (DROP-IN) – KROWNE HS1225

#31: HAND SINK (WALL MOUNT) – KROWNE HS-2L

#32: 3-COMP. SINK – JOHN BOOS (E3S8-1416-12T12) WITH SPLASH MOUNT FAUCET W/ SPRAY HOSE – T&S BRASS (B-0167-01)

#33: VEGGIE SINK – SPLASH – KROWNE (BS-1818)

#34: DROP IN SINK (DUMP SINK) – KROWNE (HS-2017)

#35: RAPID RINSER – BLENDTEC (JRE-612)

#36: WATER SPOUT – T&S BRASS (B-1210-16)

MOP SINK: #37 PROVIDE ADVANCE TABCO (09P20X), 830-AA FAUCET, 65.700 HOSE & HOLDER AND 65.600 MOP HANGER.

#40: ICE FLAKER W/BIN – HOSHIZAKI (F-300BAJ)

#40.a: WATER FILTRATION SYTEM – HOSHIZAKI (H9320-51)

WCO: WALL CLEAN OUT – ZURN,#Z-144, SMOOTH STAINLESS STEEL ACCESS COVER, DURA-COATED CAST IRON BODY. MATCH TO PIPE SIZE.

FD-1: FLOOR DRAIN – ZURN Z-415-P WITH "TYPE B" ADJUSTABLE STRAINER TOP WITH SQUARE HEELPROOF OPENING AND SECURED GRATE. DURA COATED IRON BODY WITH TRAP PRIMER CONNECTION. SIZE TO PIPE SIZE.

FCO: FLOOR CLEAN OUT – SIOUX CHIEF MODEL 834-4DNR.

FS-1: FLOOR SINK – JOSAM FS-943 WITH HALF GRATE, PVC TOP AND SEDIMENT BUCKET. (SIZE – 12"X12"). PROVIDE APPROVED STRAINERS ON ALL FLOOR SINKS. 1

SA: SHOCK ABSORBER– SHALL BE J.R.SMITH 5005 THRU 5050 AND SIZED AS RECOMMENDED BY MANUFACTURER.

TMV: MIXING VALVE – WATTS USG-B-M2, ASSE 1070.

BFP-1: BACKFLOW PREVENTER – DUAL CHECK WITH VENT – WILKINS 740, ASSE 1022.

BFP-2: BACKFLOW PREVENTER – DUAL CHECK – WILKINS 700 OR EQUAL, ASSE 1024.

BFP-3: BACKFLOW PREVENTER – DUAL CHECK WITH VENT – WILKINS 760 OR EQUAL, ASSE 1012.

WH: STORAGE ELECTRIC WATER HEATER – QTY 1 NOS. FLOOR MOUNTED ELECTRIC STORAGE WATER HEATER,A.O. SMITH NO DRE-52-15, 50 GALLON, TANK TYPE, 15 KW, 480/3PH, 68 GPH RECOVERY AT 90 DEG. RISE. CONDENSATE TO BE NEUTRALIZED AND DRAINED AS PER LOCAL CODES.

ET-1: EXPANSION TANK – THERM-X-TROL: MODEL# ST-5C-DD. 8"(D) X 14"(H), WEIGHT 10 LBS.

RCP-1: RE-CIRCULATION PUMP – GRUNDFOS, MODEL- UP 15-18 BUC5 CAPACITY – 2 GPM, 10 FEET HEAD.

TP-1: TRAP PRIMER SHALL BE EQUAL TO ZURN MODEL #Z1022 WATER SAVER, P-TRAP PRIMER. 1

MATERIAL SPECIFICATIONS:

1. ABOVE GRADE WATER PIPING SHALL BE CROSS-LINKED POLYETHYLENE (PEX) PLASTIC TUBING AND COMPLY WITH ASTM F876, CSA B137.5 STANDARDS ON TABLE 3.4 AS PER 2021 NSPC. APPLIANCE CONNECTIONS SHOULD BE BRAIDED LINES NOT SOFT COPPER.

   FITTINGS IN DOMESTIC WATER PIPING SHALL BE CROSS-LINKED POLYETHYLENE (PEX)
2. PLASTIC TUBING AND COMPLY WITH ASTM 1061, ASTM F877, ASTM F1870, ASTM F1960, ASTM F2080, ASTM F2098, ASTM F2159, ASTM F2434, ASTM F2735, CSA B137.5 AS PER 2021 NSPC.

   PIPE INSULATION FOR DOMESTIC WATER SHALL BE 1" THICK ¾ LB DENSITY FIBREGLASS WITH
3. VAPOUR BARRIER JACKET. SEE ARCH PLANS FOR EXTERIOR WALL PLUMBING DETAIL.

   EQUIPMENT PLUMBING CONNECT TO BE MADE WITH FLEX LINE FROM LOCATION OF
4. BACKFLOW PREVENTER VALVE BEHIND EQUIPMENT AT MILLWORK WALL.

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FRESH HEALTHY CAFE

ISSUE		
No.	DATE	DESCRIPTION
1		

DWG TITLE:

PLUMBING RISERS, DETAILS AND SCHEDULES

SHEET No.

P-3