

SCOPE OF WORK

REUSE ONE EXISTING 10. TON GAS HEAT ROOF TOP UNIT. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEMS .

PROVIDE TWO NEW RESTROOM EXHAUST FANS AND ONE NEW EXHAUST FAN FOR MOP SINK.

COORDINATE WITH GC ANY ADDITIONAL REFRIGERATION WORK REQUIRED AND WORK REQUIRED ON KITCHEN EXHAUST SYSTEMS AND WITH GC AND PLUMBING CONTRACTOR PROVIDING CONDENSATE LINES FOR MECHANICAL EQUIPMENT AND GAS FLUE FOR WATER HEATERS.

RESTAURANT REQUIREMENTS

*HOOD EXHAUST FAN(S) SHOULD BE AS FAR FROM LEASE LINE AS POSSIBLE AT ROOF (5' MIN. PREFERRED). ENSURE THAT THEY ARE NO LESS THAN 10' FROM ANY ADJACENT TENANT INTAKE OR RTU.

*PROVIDE WATERPROOFING MEMBRANE ALONG ALL KITCHEN WALLS THAT ABUT LEASE LINE/DEMISING WALLS, UP TO 8' A.F.F. AND 3' AWAY FROM WALL. BEHIND/UNDER FINISHES (MAPEI, RED GARD, OR SIMILAR), EVEN BEHIND WATER RESISTANT FINISHES. PROVIDE PHOTOGRAPHIC EVIDENCE OF INSTALLATION.

*SEAL AROUND ALL REAR DOORS, ESPECIALLY IN KITCHEN AREAS.

*COOLERS/FREEZERS TO BE 4" MINIMUM FROM DEMISING (LEASE LINE) AND EXTERIOR WALLS, AND 2" MINIMUM FROM TENANTS' INTERIOR WALLS, WITH MOISTURE AND MOLD RESISTANT WALL BOARD AND WATERPROOFING MEMBRANE BEHIND.

*PROVIDE STRUCTURAL REINFORCEMENT FOR THE HOOD EXHAUST FAN (ROOF) OPENINGS.

*WASTE IS PREFERRED TO BE ON A CLOSED LOOP SYSTEM (SIMILAR TO RESTAURANT TECHNOLOGIES), REFILL AND REMOVAL BOX SHALL BE RECESSED WITHIN REAR WALL.

MECHANICAL REQUIREMENTS

*DISTRIBUTE WEIGHT OF HVAC SYSTEMS UNIFORMLY, TO NOT OVERLOAD WOOD/STEEL JOISTS/TRUSSES. HVAC EQUIPMENT SHOULD NOT BE VISIBLE, SCREEN OR LOCATE ACCORDINGLY.

*REINFORCE ROOF OPENINGS WITH 4X4X1/4 STEEL ANGLE ON ALL SIDES MINIMALLY, OR PER AHJ.

*BALANCING DAMPENERS SHALL BE AT ALL BRANCH LINES.

*NO DUCT BOARD ALLOWED.

*PROVIDE ROOF WALK PADS ON ALL SIDES OF REGULARLY MAINTAINED ROOF TOP EQUIPMENT, INCLUDING AHUS.

*RETURN AIR TO BE FULLY DUCTED, OR TENANT TO REPLACE/ENSURE ALL MEP (EQUIPMENT, DUCTWORK, CONDUIT, PIPING, ETC.) IS PLENUM RATED. LL MAKES NO GUARANTY THAT EXISTING MEP IS PLENUM RATED.

*ALL HARD CEILINGS TO HAVE AN ACCESS HATCH DIRECTLY BELOW MEP EQUIPMENT (AHUS, TRANSFORMERS, EXHAUST FANS, WATER METER/SUBMETER, ETC.) FOR SERVICING.

*NO EXPOSED ELECTRICAL CONDUIT FOR ROOF TOP EQUIPMENT. HOWEVER, IF UNAVOIDABLE, IT SHOULD BE ATTACHED TO UNITS(6) AND NOT ATTACHED TO CURB OR CURB FLASHING, NOR RUN FREELY ACROSS ROOF. MOUNT CONVENIENCE OUTLETS TO EQUIPMENT.

*REFRIGERANT LINES TO PENETRATE ROOF ADJACENT TO ROOF UNITS (AHUS, CONDENSERS, HEAT PUMPS, ETC.), THROUGH SEPARATE ROOF PENETRATION, USING LL'S REQUIRED ROOFER. THE LINES MAY SHARE A SINGLE PENETRATION, BUT HAVE MINIMAL RUN LENGTHS AND BE IN A NEAT AND ORGANIZED MANNER.

*ROUTE CONDENSATE LINES BELOW ROOF (WITHIN CURB OPENING OR PITCH PAN) IMMEDIATELY ADJACENT TO THE ROOF. HELD TIGHT TO DECK, INSULATE, AND TO DISCHARGE WITHIN DEMISED PREMISES. ANY PORTION OF THE CONDENSATE DRAIN CONNECTION ABOVE ROOF DECK TO BE COPPER (MAY TRANSITION TO PVC ONCE BELOW DECK). DO NOT PENETRATE SIDE OF CURB.

*INSULATE ALL CONDENSATE & REFRIGERANT LINES TO PREVENT SWEATING, DRIPPING ONTO CEILING.

MECHANICAL PLAN NOTES

A. REUSE ONE EXISTING 10.0 TON GAS HEAT ROOF TOP UNIT. PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEMS. 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 RTU 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 & SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A.

D. THERMOSTATS & HUMIDISTAT SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. COORDINATE FINAL LOCATION WITH OWNER.

E. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-6 INSULATION. EXTERIOR AIR DUCTS TO HAVE R-8 INSULATION ACCORDING TO ASHRAE 90.1-2019 TABLE 6.8.2.

F. 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.

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

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

I. 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.

J. EXHAUST HOODS, DUCTS, CURBS, FANS AND CONTROLS TO BE SUPPLIED AND INSTALLED BY HOOD CONTRACTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, THE IBC, NEC AND NFPA 96.

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

L. PROVIDE FIRE/SMOKE + SMOKE COMBINATION DAMPERS WHEREVER REQUIRED. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR SMOKE/FIRE RATING OF THE WALLS/SLABS/ROOF. COORDINATE ELECTRICAL POWER REQUIREMENT FOR DAMPER ACTUATORS WITH ELECTRICAL CONTRACTOR.

M. COORDINATE ALL ROOF PENETRATIONS, CURB/ROOF RAIL LOCATIONS, ROOF EQUIPMENT WEIGHTS & DIMENSIONS WITH STRUCTURAL AND ROOFING CONTRACTOR.

N. PROVIDE WEATHER-PROOF COATING FOR ALL DUCTWORK RUNNING ON THE ROOF.

O. MAINTAIN MIN. 10 FT. DISTANCE BETWEEN ALL EXHAUST AIR SOURCES AND OUTSIDE AIR INTAKE SOURCES ON THE ROOF.

P. PROVIDE MECHANICAL SCREENS AROUND ROOF EQUIPMENT IF REQUIRED. COORDINATE WITH ARCHITECT/OWNER OR LANDLORD.

O. MAINTAIN MIN. 3 FT. VERTICAL DISTANCE BETWEEN ALL OUTSIDE AIR SOURCES AND EXHAUST AIR INTAKE SOURCES ON THE ROOF IF SUCH EXHAUST SOURCES FALL WITHIN 10' DISTANCE.

NEWTON NJ, 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. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE / ACCA 183.

2. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2021 INTERNATIONAL MECHANICAL CODE, CHAPTER 4.

3. 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 ASHRAE 90.1 2019 REQUIREMENTS AS OUTLINES IN SECTION.

4. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS' EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.

5. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE INTERNATIONAL 2021 INTERNATIONAL MECHANICAL CODE:
A. VENTILATION SYSTEM BALANCING 2021 INTERNATIONAL MECHANICAL CODE - 403.3

6. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
A. STANDARDS OF HEATING 2021 INTERNATIONAL MECHANICAL CODE - 309.1
B. DUCT CONSTRUCTION AND INSTALLATION 2021 INTERNATIONAL MECHANICAL CODE - 603
C. AIR INTAKES, EXHAUSTS AND RELIEF 2021 INTERNATIONAL MECHANICAL CODE - 401.5
D. AIR FILTERS 2021 INTERNATIONAL MECHANICAL CODE - 605
E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - 2021 INTERNATIONAL MECHANICAL CODE - 606
F. GAS FIRED EQUIPMENT - 2021 INTERNATIONAL FUEL AND GAS CODE.

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 2021 INTERNATIONAL MECHANICAL CODE - 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. VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED METHOD. CONTRACTOR SHALL SUBMIT THE AIR BALANCE REPORT TO THE INSPECTOR.

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 ARCHITECTS OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.

I. ALL A/C ROUND EXPOSED DUCTS WILL BE SPIRAL GALVANIZED AND READY FOR PAINTING. ALL RECTANGULAR DUCTS OVER CEILINGS MAY BE SHEET METAL WITH EXTERNAL INSULATION AND ALL EXPOSED ROUND SHEET METAL DUCTS SHALL BE INTERNALLY INSULATED.

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

K. IF APPLICABLE CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR KITCHEN VENTILATION SYSTEM INCLUDING TYPE 1 HOOD AND FOR THE WALK-IN COOLER & FREEZER.

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

M. 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.

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

MAKEUP AIR UNIT SCHEDULE

TAG	KSF-1(N)
UNIT	GAS HEAT
MANUFACTURER	CAPTIVEAIRE
MODEL	A1-D.250-16Z-MPU
STATUS	NEW
MOUNTING	ROOF
TONNAGE	3.0 TONS
TOTAL COOLING CAPACITY	35.9 MBH
SENSIBLE COOLING CAPACITY	24.2 MBH
SEER	14
HEATING (IN)	128.3 MBH
HEATING (OUT)	118.0 MBH
THERMAL EFF(%)	92%
SUPPLY AIR (CFM)	1892
HP	2.5
V/PH/HZ	208/3/60
MCA (A)	8.3
MCOP (A)	15
WEIGHT (lbs)	1250

INCLUDED SYSTEM OPTIONS FOR KSF-1(N)

- DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 16" DIRECT DRIVE FAN.
- INTAKE HOOD WITH EZ FILTERS.
- DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
- GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE.
- GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE.
- SHIP LOOSE GAS STRAINER. TO BE INSTALLED UPSTREAM OF UNIT CONNECTION, 3/4" CONNECTION.
- CASLINK BUILDING MONITORING SYSTEM COMMUNICATIONS MODULE. REQUIRES INTERNET & FIELD WIRED ETHERNET CONNECTION OR 3G CELLULAR SERVICE. INCLUDES REV 3 COMM MODULE, RJ45 TO MODBUS CONVERTER, 3 FT CAT5 CABLE, AND 1 FT OF SHIELDED TWISTED PAIR.
- MODORIZED BACK DRAFT DAMPER 18" X 18" FOR SIZE 1 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, TFB120S ACTUATOR INCLUDED.
- FULL CRATING FOR COMMERCIAL HEATERS FOR SHIPPING.
- 3 TON, SINGLE CIRCUIT MODULAR PACKAGED COOLING OPTION FOR SIZE 1 DFE/H MODULAR PACKAGED UNIT. INCLUDES CONDENSER, DX COIL, FILTER DRYER KIT, THERMAL EXPANSION VALVE, R410A REFRIGERANT, AND REFRIGERANT PIPING. (1,100 TO 1,800 CFM) WHEN ORDERED WITH OPPOSITE AIRFLOW CONVENIENCE ACCESS AND COIL PIPING WILL REMAIN IN STANDARD POSITION. DRAIN AND SLEDS WILL MOVE TO THE OPPOSITE SIDE. ANY OTHER CHANGE WILL REQUIRE CLT CONDENSERS REQUIRE SEPARATE 208V, 3 PHASE POWER SUPPLY UNLESS ORDERED WITH SINGLE POINT CONNECTION. COIL = 2EZ100IN.
- DOWNTURN PLENUM FOR SIZE 1 COOLING COIL MODULE - REQUIRED FOR DOWN DISCHARGE COOLING COIL APPLICATIONS.
- SIZE 1 MOISTURE ELIMINATOR OPTION FOR DX COILS, MPUS AND CHILLED WATER COILS. - ALLOWS COOLING COIL FACE VELOCITY TO INCREASE TO 650 FPM. INCREASES COOLING COIL MAX CFM TO 3650 CFM.
- LOCKING CAPS FOR SINGLE CONDENSER UNITS. CONSISTS OF 2 LOCKING CAPS, PART# NCP-4, AND 1 KEY, PART# NC-KEY.
- ECM WIRING PACKAGE FOR ZIEHL SUPPLY MOTORS WITH PWM SIGNAL FROM ECPM03 PREWIRE
- HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/MPU SECTION).
- 2 YEAR PARTS WARRANTY.

KSF-1(N) CONDENSER SCHEDULE

TAG	KSF-1(N)
UNIT	DX
MANUFACTURER	CAPTIVEAIRE
MODEL	A1-D.250-16Z-MPU
STATUS	NEW
MOUNTING	ROOF
NOMINAL CAPACITY	3.0 TONS
SEER	14
V/PH/HZ	208-230/3/60
MCA (A)	14.5
MCB (A)	20

ROOF TOP UNIT SCHEDULE

UNIT TAG	RTU-1(E)
UNIT HEAT	GAS HEAT
MANUFACTURER	YORK
MODEL	DL-10N24NTAA3C
STATUS	EXISTING
MOUNTING	ROOF
NOMINAL CPACITY	10.0 TON
TOTAL COOLING CAPACITY (MBH)	S A E
SENSIBLE COOLING CAPACITY (MBH)	S A E
HEATING MBH (INPUT)	240 (V.I.F)
HEATING MBH (OUTPUT)	192 (V.I.F)
EER / IEER	S A E
THERMAL EFF. (%)	S A E
SUPPLY AIR CFM	4000
OUTDOOR AIR CFM	750
ESP (IN W.C.)	S A E
VOLT/PH/HZ	208-230/3/60
MCA (A)	54.6 (V.I.F)
MCOP (A)	70 (V.I.F)
WEIGHT (LBS)	S A E

NOTES FOR EXISTING RTU-1(E).

- EXISTING RTUS WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
- S A E - SAME AS EXISTING. V.I.F. - VERIFY IN FIELD
- CONTRACTOR TO FIELD VERIFY IF ALL RTU ARE WORKING AT THEIR 100% RATED CAPACITIES / LOADS. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
- CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF UNIT ON SITE.
- IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING RTU. CO-ORDINATE FINAL LOCATION OF T-SENSOR WITH ARCHITECT / OWNER.
- CONTRACTOR TO BALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.
- REPLACE FILTERS, IF REQUIRED.
- CONTRACTOR TO FIELD VERIFY AND CONFIRM IF EXISTING RTU HAS OUTSIDE AIR / ECONOMIZER PROVISION. IF NOT CONTRACTOR SHALL FIELD INSTALL THE OUTSIDE AIR / ECONOMIZER PROVISION PER MANUFACTURER'S INSTRUCTION AND LOCAL CODE REQUIREMENTS.

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

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	A1	A2	B	R
USE	SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETURN
MODEL	TDC-AA	300 FS	PAS	TDC-AA	56FL
MOUNTING	CEILING	DUCT	CEILING	CEILING	WALL/DUCT
LOCATION	AS SHOWN	AS SHOWN	KITCHEN	AS SHOWN	AS SHOWN
FACE SIZE	24" X 24"	AS SHOWN	24" X 24"	12" X 12"	AS SHOWN
NECK SIZE	REFER TABLE A	-	REFER TABLE A	REFER TABLE A	-
FRAME TYPE	LAY IN	FLANGED	LAY IN	LAY IN	LAY IN
NOISE CRITERIA	<30	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

NOTES:

- MOUNTING FRAME TYPE SHALL BE COORDINATED WITH CEILING/ WALL CONSTRUCTION.
- COORDINATE FINAL FINISH/COLOR WITH ARCHITECT/OWNER.
- PROVIDE ROUND TO SQUARE NECK ADAPTOR.
- PROVIDE 4 WAY AIR THROW PATTERN UNLESS NOTES OR INDICATED.

OCCUPANCY CALCULATION PER IMC - 2021, TABLE 403.3.1.1

BOH / KITCHEN	422 SQ. FT.	@20 PEOPLE/1000SQ.FT.	10 PEOPLE
DINING	694 SQ. FT.	@70 PEOPLE/1000SQ.FT.	49 PEOPLE
FRONT SERVICE AREA	152 SQ. FT.	@15 PEOPLE/1000SQ.FT.	3 PEOPLE
		TOTAL	62 PEOPLE

VENTILATION REQUIREMENTS PER 2021 IMC TABLE 403.3.1.1

DINING	694 SQ. FT. X 0.18 CFM/SQ. FT. = 125 CFM	
	49 PEOPLE X 7.5 CFM/PEOPLE. = 368 CFM	
FRONT SERVICE AREA	152 SQ. FT. X 0.12 CFM/SQ. FT. = 18 CFM	
	3 PEOPLE X 7.5 CFM/PEOPLE. = 23 CFM	
BOH / KITCHEN	422 SQ. FT. X 0.12 CFM/SQ. FT. = 51 CFM	
	10 PEOPLE X 7.5 CFM/PEOPLE. = 75 CFM	
OUTSIDE AIR REQUIRED		660 CFM
BOH / KITCHEN	422 SQ. FT. X 0.7 CFM/SQ. FT. = 296 CFM	
RESTROOMS	70 CFM PER X NO. OF FIXTURE	140 CFM
MOP SINK	70 CFM	70 CFM
EXHAUST AIR REQUIRED		506 CFM
AIR BALANCE		
RTU-1(E) O/A PROVIDED		+750 CFM
KSF-1(N)-O/A PROVIDED		+1892 CFM
KEF-1(N)		-2365 CFM
BEF-1(N) & BEF-2(N) @70CFM EACH		-140 CFM
EF-1(N)		-70 CFM
BUILDING PRESSURE		+67 CFM

EXHAUST FAN SCHEDULE

DESIGNATION	BEF-1(N)	BEF-2(N)	EF-1(N)	KEF-1(N)
STATUS	NEW	NEW	NEW	NEW
QUANTITY	1	1	1	1
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	CAPTIVEAIRE
MODEL	SP-A90	SP-A90	SP-A90	DU180HFA
CFM	70@ 0.3" W.C ESP	70@ 0.3" W.C ESP	70@ 0.3" W.C ESP	2365@1.4" W.C ESP
HP	-	-	-	1.5
FLA(AMPS)	0.17	0.17	0.17	6.5
ACCESSORIES	BD	BD	BD	BD
WEIGHT (LBS)	12	12	12	250
V/PH/HZ	115/1/60	115/1/60	115/1/60	208/3/60

OPTIONS FOR KEF-1(N):

- GREASE BOX.
- FULL CRATING FOR EXHAUST FANS.
- EXHAUST FAN HEAT BAFFLE.
- 2 YEAR PARTS WARRANTY.

INTERLOCKED WITH KSF-1(N)

























OPTIONS FOR OTHER FANS

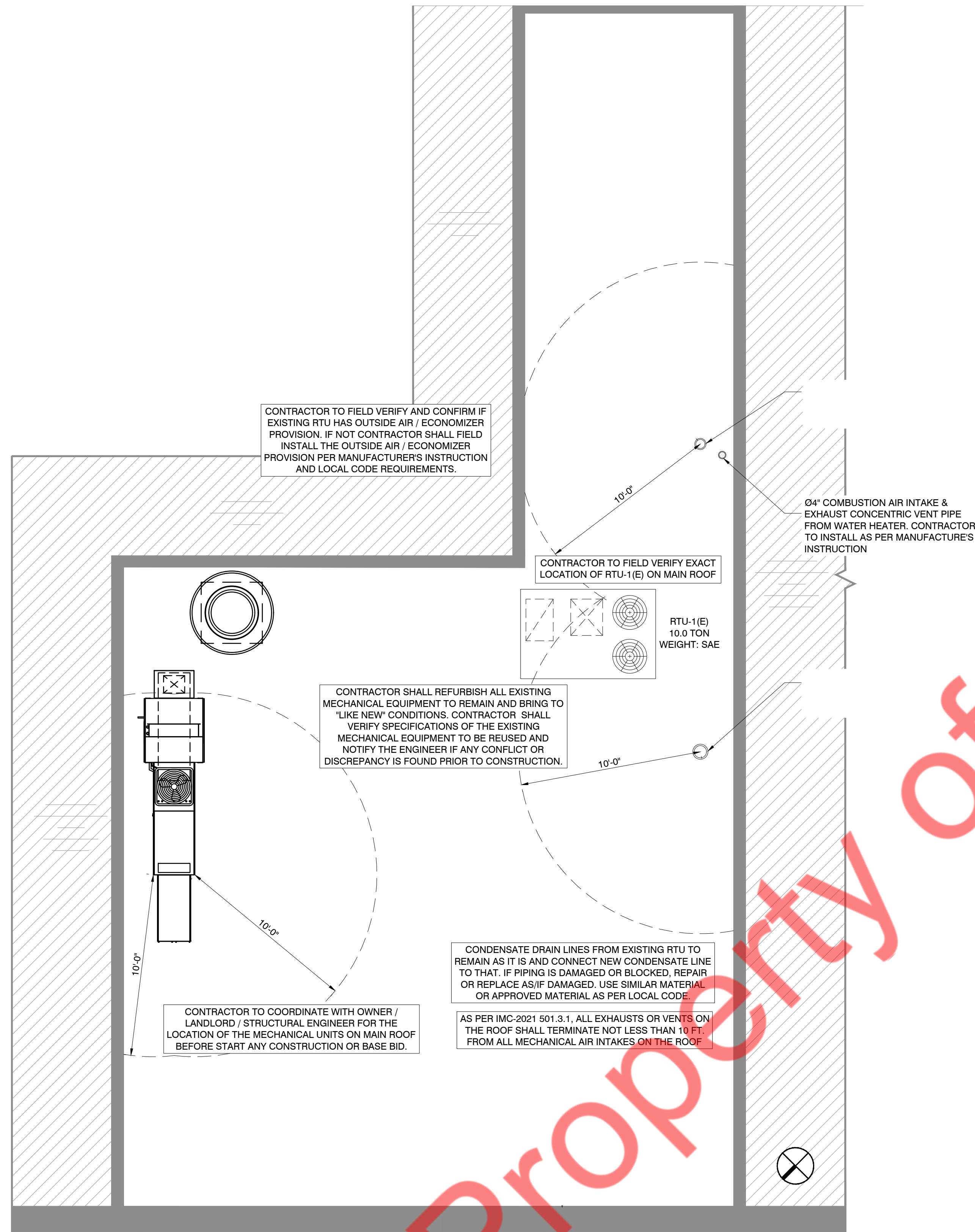
- BEF-1(N) & BEF-2(N) FANS SHALL BE INTERLOCKED RTU-1(E)
- EF-1(N) INTERLOCK WITH ROOM LIGHT.
- COORDINATE ELECTRICAL POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE BACK DRAFT DAMPER.

NECK SIZE TABLE - A

FLEX DUCT DIA	CFM RANGE
Ø6"	0-100
Ø8"	101-200
Ø10"	201-400
Ø12"	401-600
Ø14"	601-900

MECHANICAL SYMBOLS

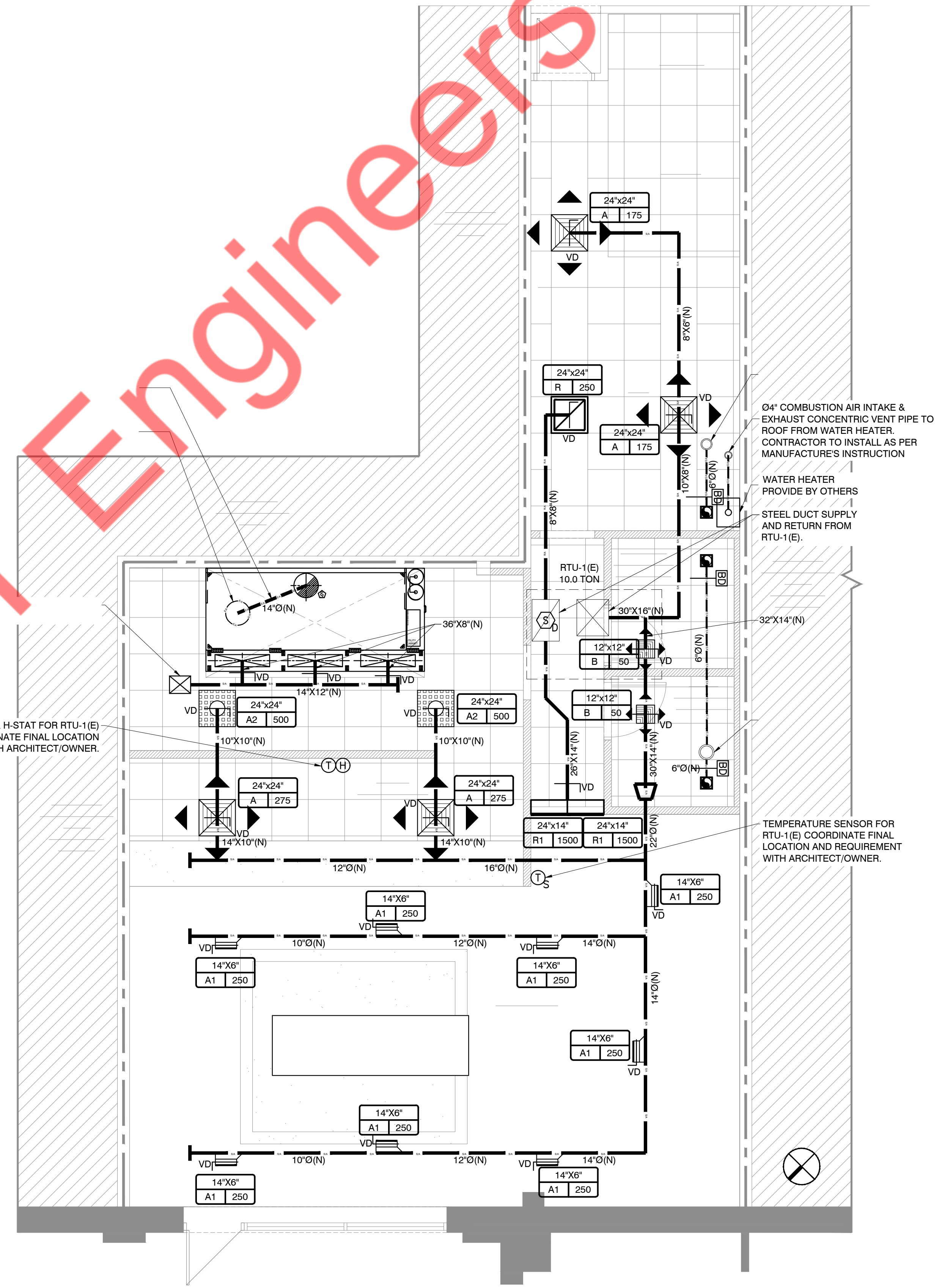
	EXHAUST FAN		EXHAUST FAN WITH LIGHT
	SUPPLY OR OUTSIDE AIR DUCT		OPPOSED BLADE DAMPER
	RETURN OR EXHAUST AIR DUCT		DUCT SMOKE DETECTOR
	INSULATED RIGID DUCTWORK		PROGRAMMABLE THERMOSTAT
	DUCT TRANSITION		TEMPERATURE SENSOR
	MANUAL VOLUME DAMPER		ROUND DUCT DIAMETER
	FLEXIBLE DUCTWORK R-6.0		BACK DRAFT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



HVAC ROOF PLAN

SCALE
1/4" = 1'-0"

2



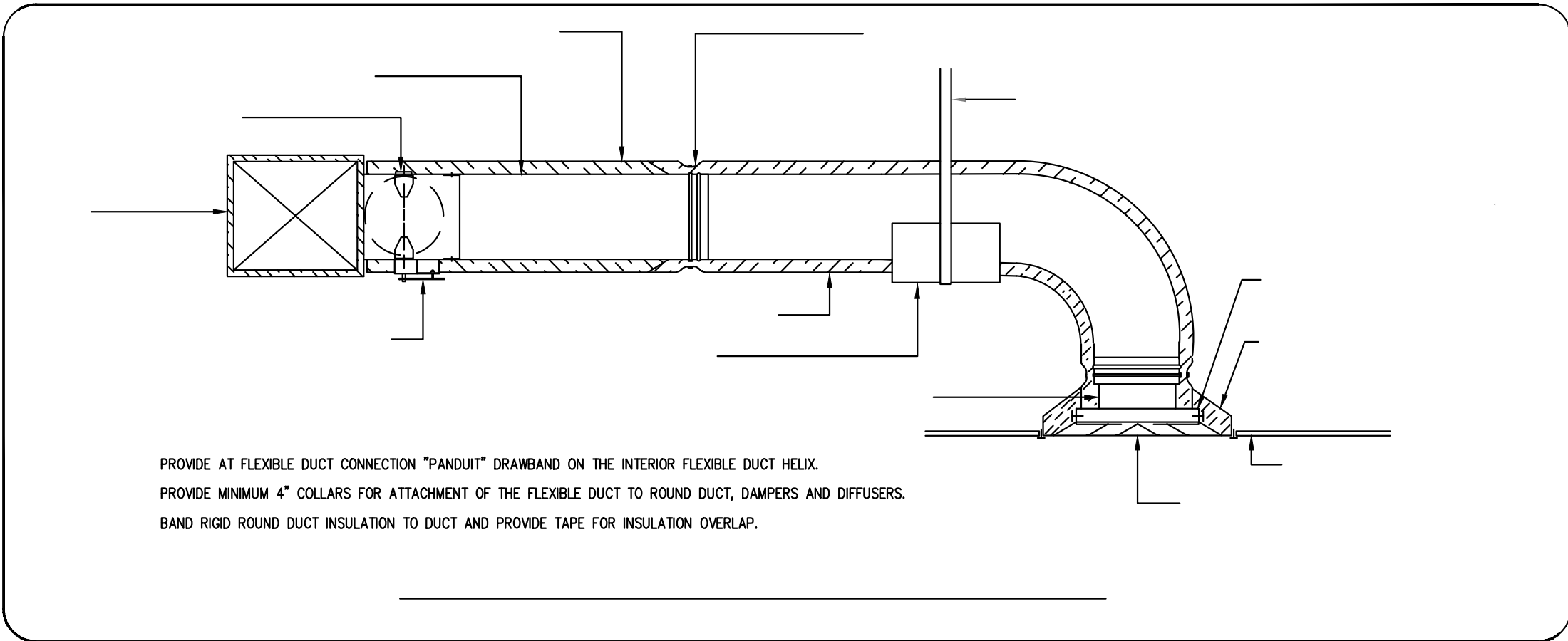
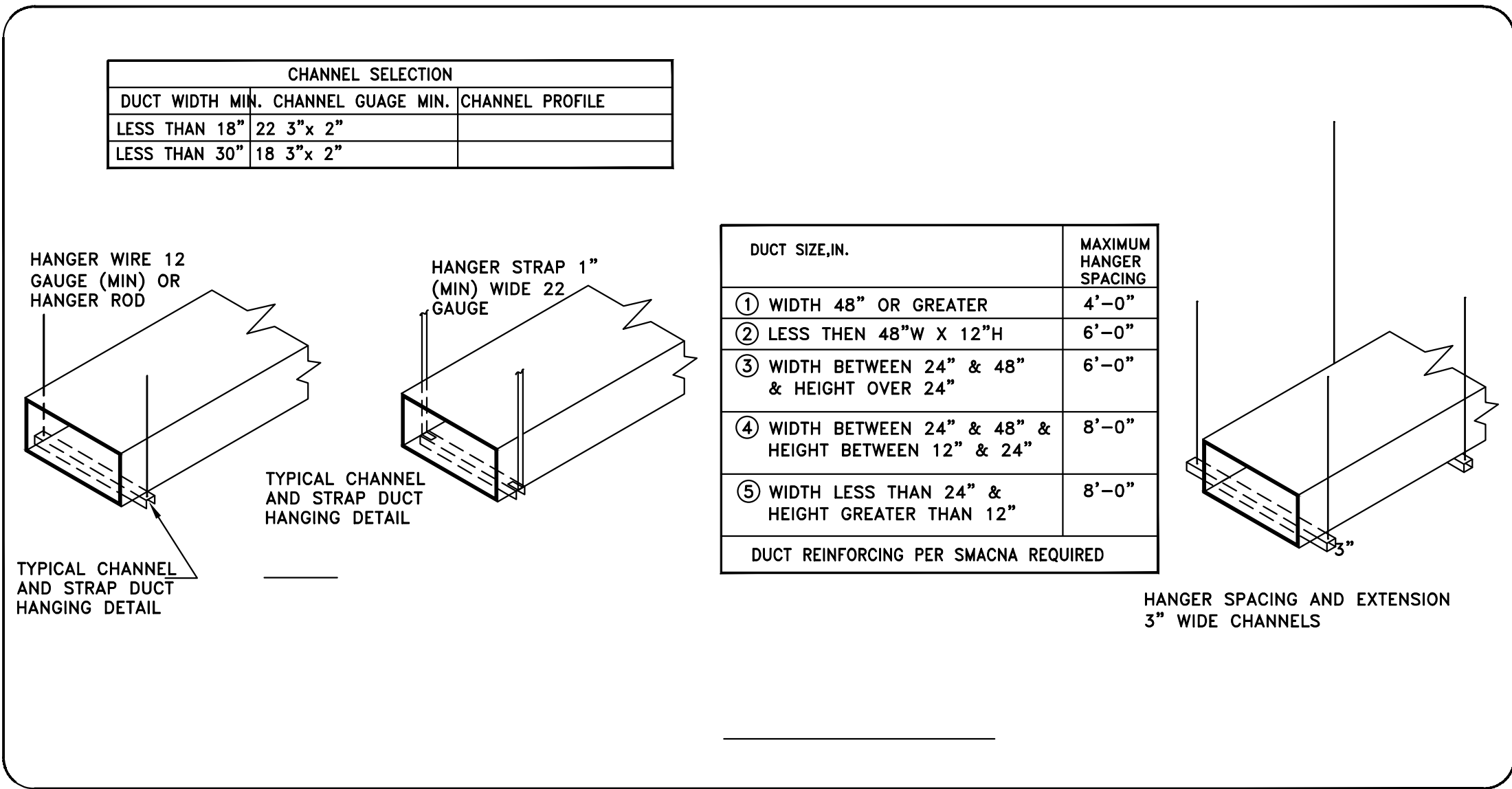
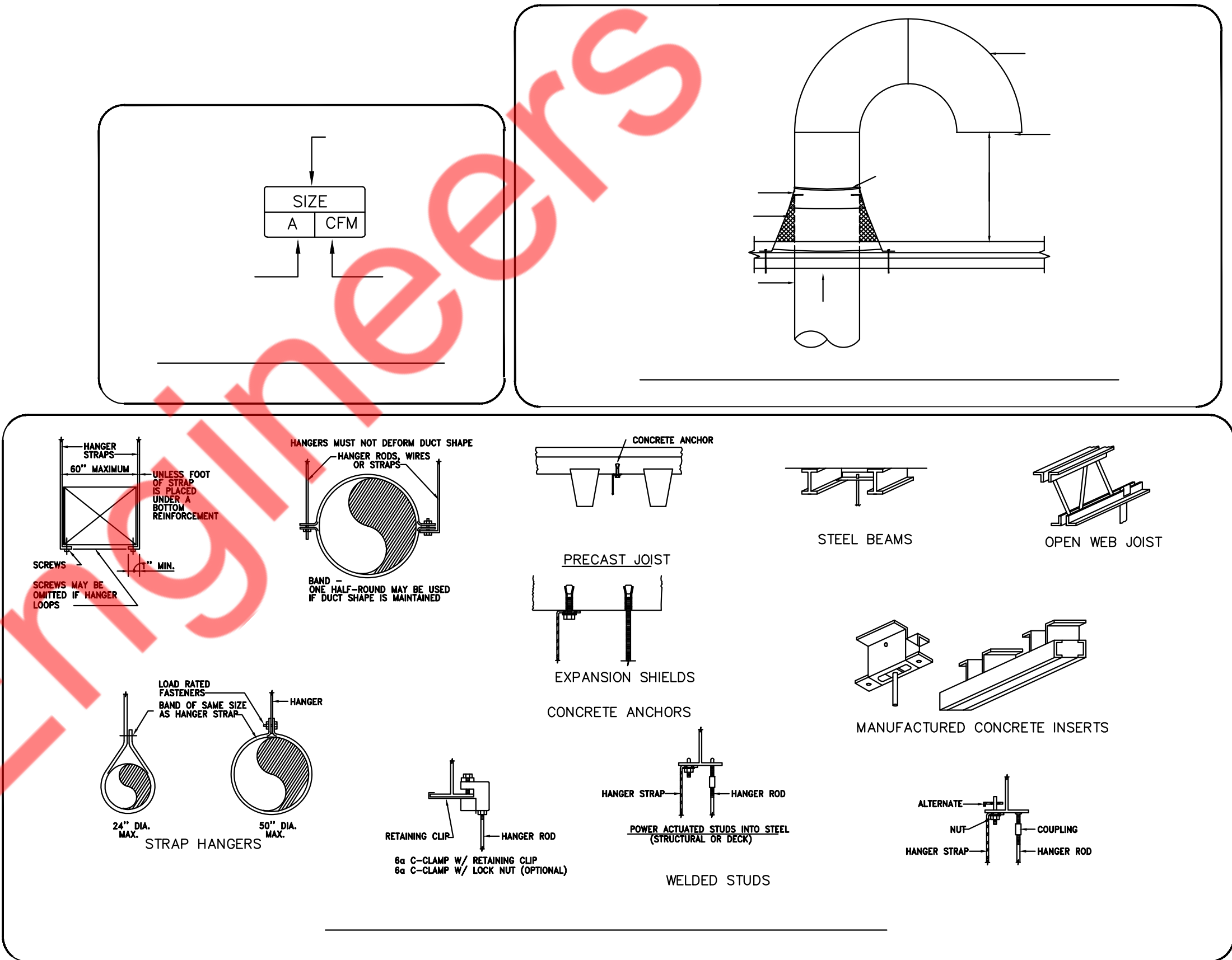
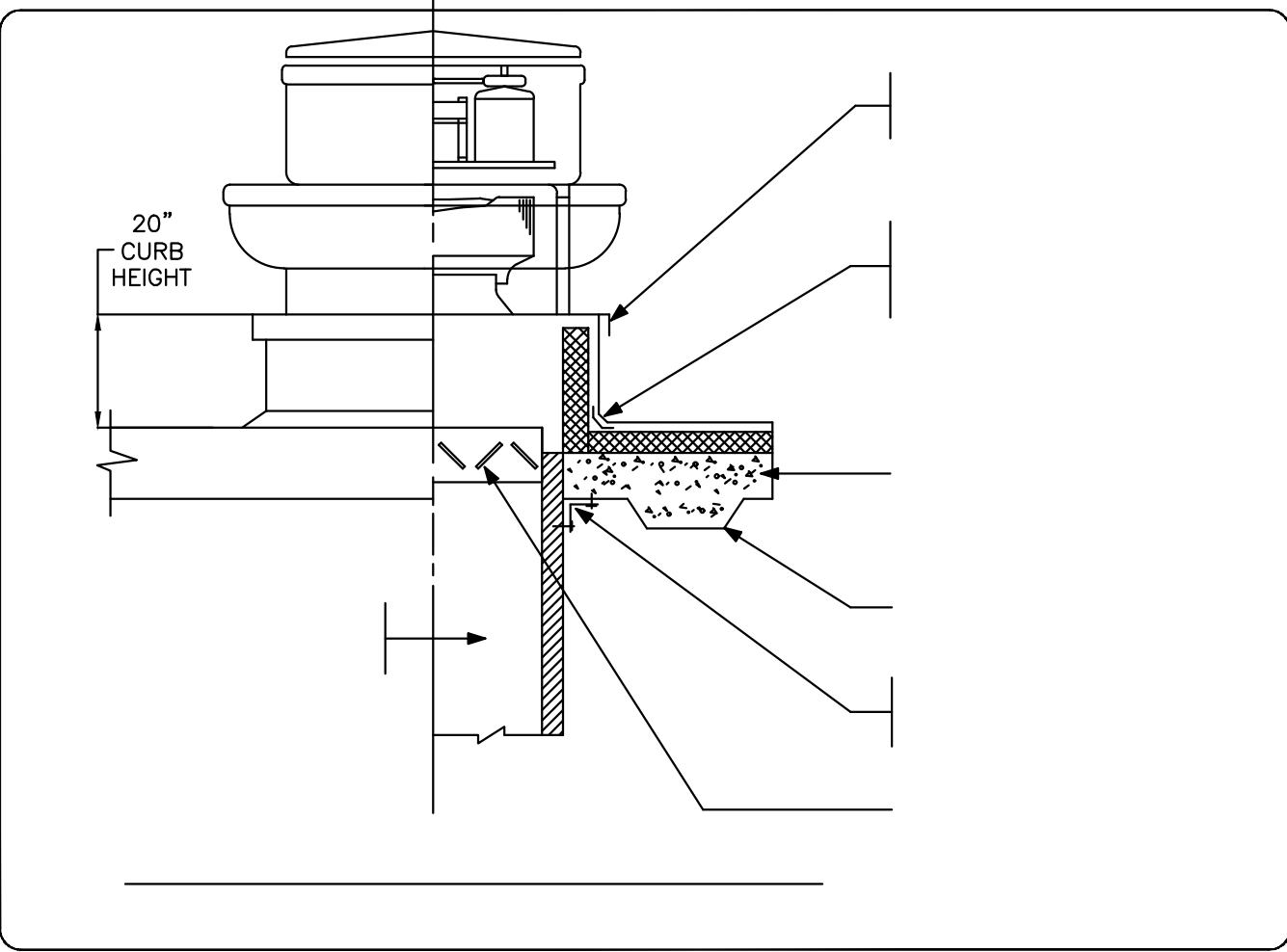
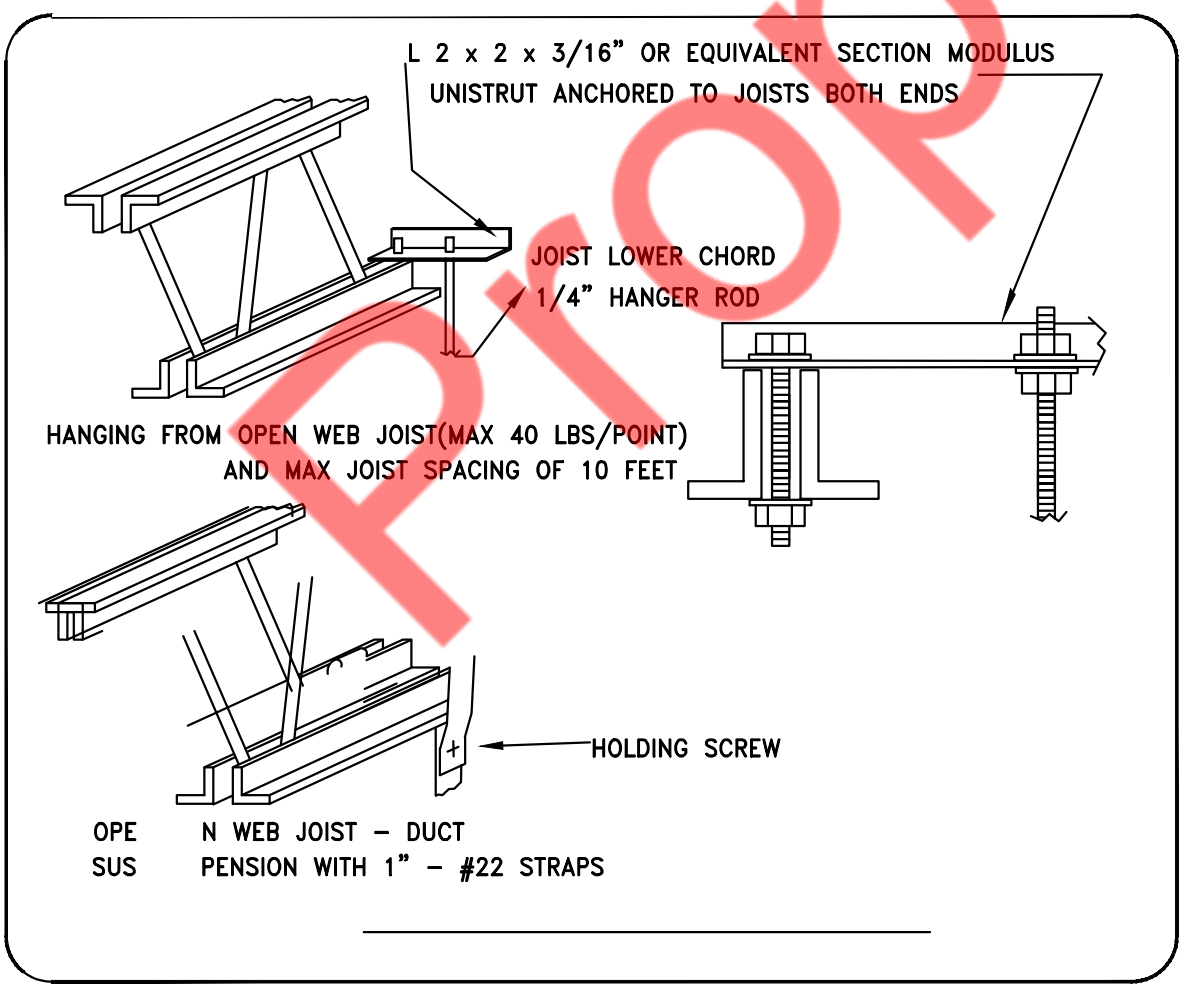
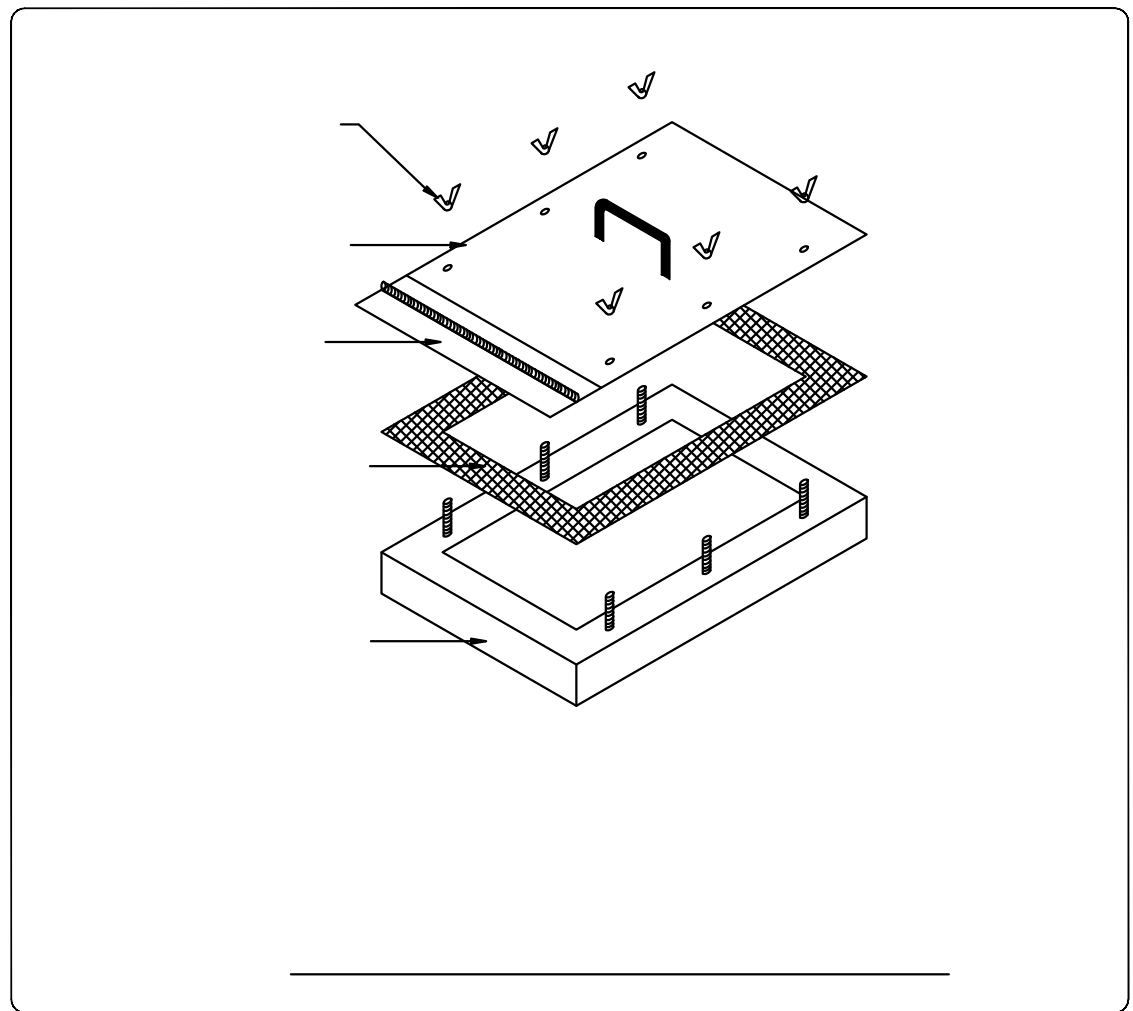
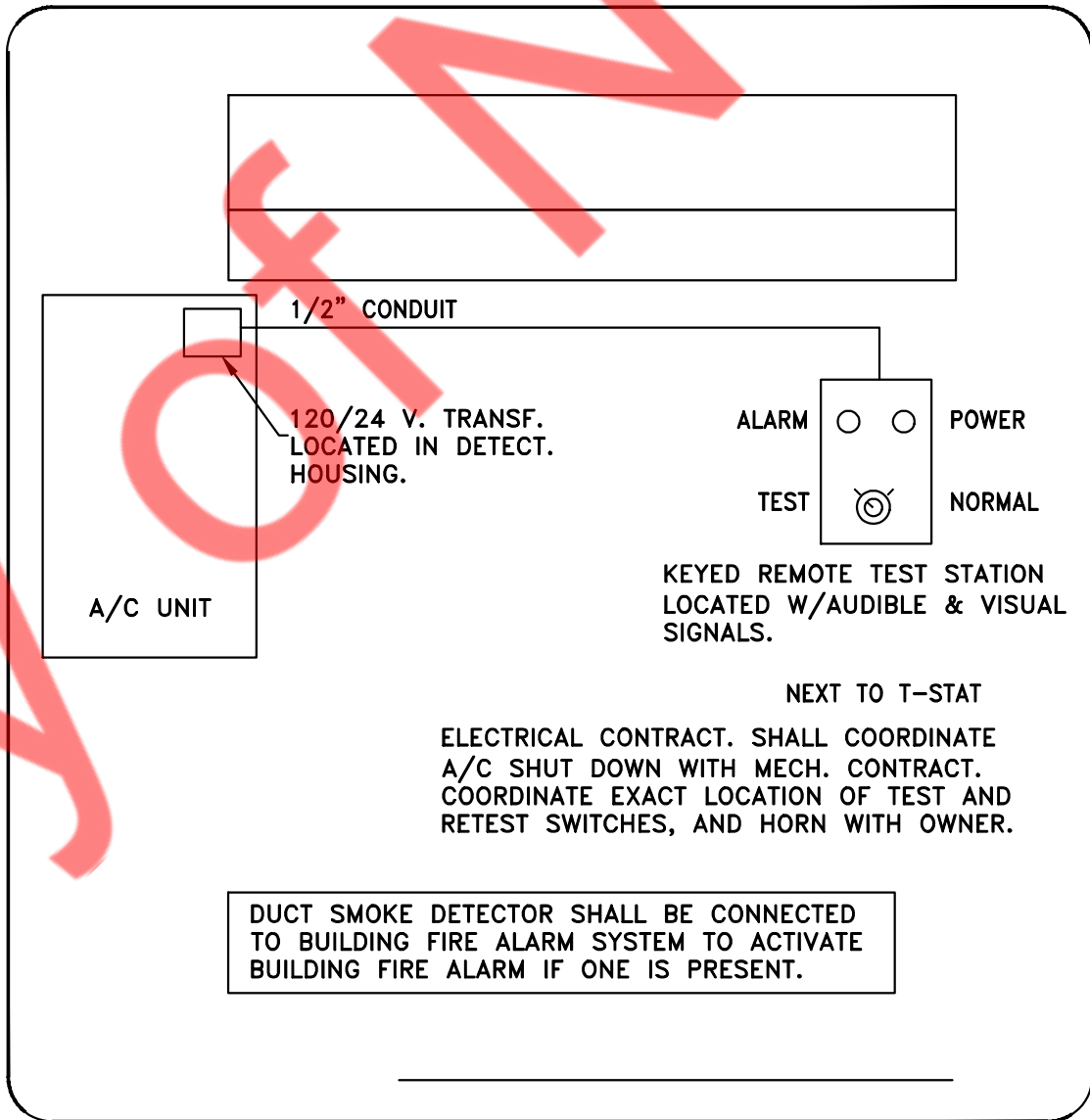
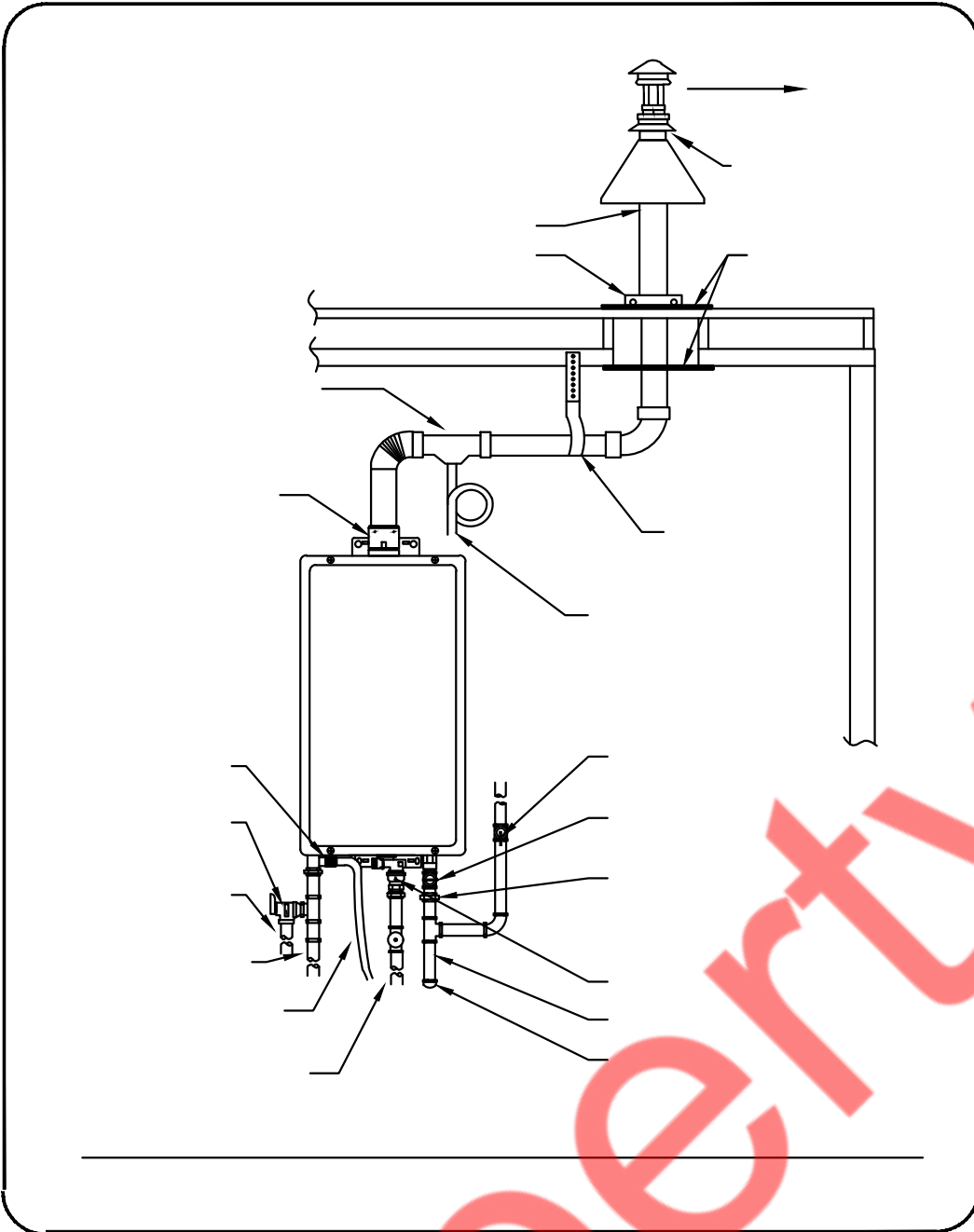
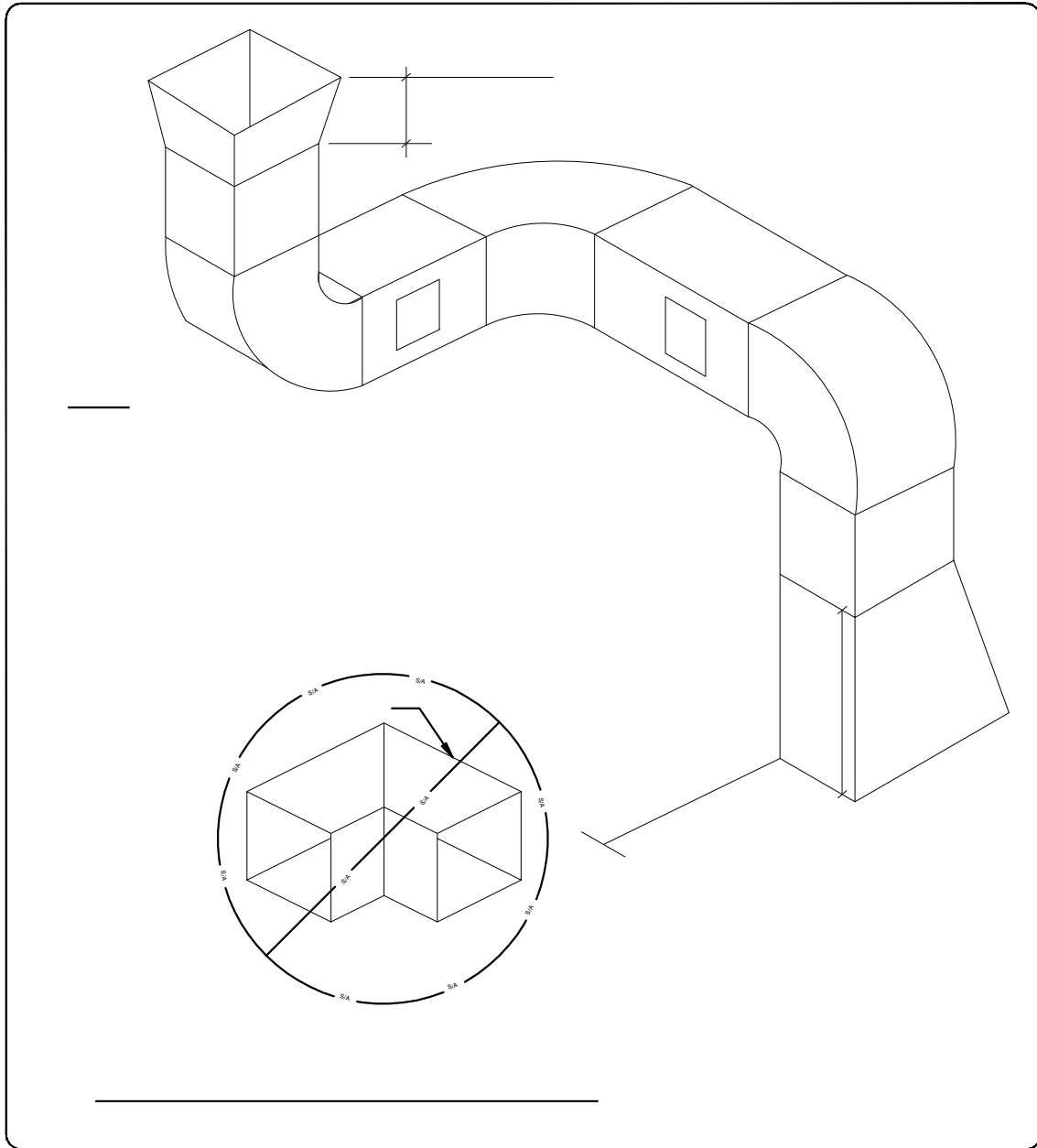
HVAC FLOOR PLAN

SCALE
1/4" = 1'-0"

1

GREASE DUCT SPECIFICATIONS

1. PROVIDE CLEAN OUT AT ALL ELBOWS AND BOTTOM OF RISER AND EVERY 20 FEET HORIZONTAL KITCHEN EXHAUST DUCT AND SHALL COMPLY ALL THE REQUIREMENTS PER 2021 INTERNATIONAL MECHANICAL CODE 506.3.8 & 506.3.9.
2. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE DESIGNED FOR THE TYPE OF COOKING APPLIANCE AND HOOD SERVED. COMMERCIAL KITCHEN GREASE DUCTS SHALL BE OF 16 GAUGE MINIMUM STEEL OR FACTORY FABRICATED GREASE DUCT WITH LISTED AND LABELED IN ACCORDANCE WITH UL 1978.
3. JOINTS, SEAMS AND PENETRATIONS OF GREASE DUCTS SHALL BE MADE WITH A CONTINUOUS LIQUID TIGHT WELD OR BRAZE MADE ON THE EXTERNAL SURFACE IF THE DUCT SYSTEMS.
4. DUCT TO EXHAUST FAN CONNECTIONS SHALL BE FLANGED, GASKETED AND BOLTED TO THE INLET AND OUTLET OF THE FAN FOR INLINE FANS. APPROVED FLEXIBLE CONNECTIONS MAY BE PROVIDED.
5. A VIBRATION ISOLATION CONNECTOR FOR CONNECTING A DUCT TO A FAN SHALL CONSIST OF NON-COMBUSTIBLE PACKING IN A METAL SLEEVE JOINT OF APPROVED DESIGN OR SHALL BE A COATED-FABRIC FLEXIBLE DUCT CONNECTOR LISTED AND LABELED FOR THE APPLICATION. VIBRATION ISOLATION CONNECTORS SHALL BE INSTALLED ONLY AT THE CONNECTION OF A DUCT TO A FAN INLET OR OUTLET.
6. PRIOR TO THE USE OR CONCEALMENT OF ANY PORTION OF A GREASE DUCT SYSTEM, A LEAKAGE TEST SHALL BE PERFORMED AS PER IMC 2021 SECTION 506.3.2.5. DUCT SHALL BE CONSIDERED TO BE CONCEALED WHERE INSTALLED IN SHAFTS OR COVERED BY COATINGS OR WRAPS THAT PREVENT THE DUCTWORK FROM VISUALLY INSPECTED ON ALL SIDE. THE DUCT INSTALLER SHALL BE RESPONSIBLE FOR PROVIDING THE NECESSARY EQUIPMENT AND PERFORMING THE GREASE DUCT LEAKAGE TEST. THE DUCT LEAKAGE TEST SHALL BE PERFORMED FOR ALL THE DUCT SYSTEMS, INCLUDING THE DUCT-TO-DUCT CONNECTION. THE DUCTWORK SHALL BE PERMITTED TO BE TESTED IN SECTIONS, PROVIDED THAT EVERY JOINT IS TESTED (IF TEST IS FAILED, CONTRACTOR TO PROVIDE NEW KITCHEN EXHAUST DUCT).
7. PROVIDE SMOKE TEST TO PROOF TIGHTNESS OF THE GREASE DUCT.
8. GREASE DUCT BRACING AND SUPPORTS SHALL BE OF NON-COMBUSTIBLE MATERIAL SECURELY ATTACHED TO THE STRUCTURE AND DESIGNED TO CARRY GRAVITY AND SEISMIC LADS WITHIN THE STREET LIMITATIONS OF THE 2021 INTERNATIONAL BUILDING CODE. BOLTS, SCREWS, RIVETS AND OTHER MECHANICAL FASTENERS SHALL NOT PENETRATE DUCT WALLS.
9. A RESIDUE TRAP SHALL BE PROVIDED AT THE BASE OF EACH VERTICAL RISER WITH PROVISION FOR CLEANOUT IN ACCORDANCE WITH NFPA 96.
10. CLEANOUT OPENINGS SHALL BE PROVIDED AT EVERY CHANGE IN DIRECTION, WITHIN 3 FEET OF THE EXHAUST FAN.
11. CLEANOUT OPENINGS SHALL BE EQUIPPED WITH TIGHT-FITTING DOORS CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN THAT REQUIRED FOR THE DUCT. DOORS SHALL BE EQUIPPED WITH A SUBSTANTIAL METHOD OF LATCHING, SUFFICIENT TO HOLD THE DOOR TIGHTLY CLOSED. DOOR ASSEMBLIES SHALL HAVE A GASKET OR SEALANT THAT IS NONCOMBUSTIBLE AND LIQUID TIGHT AND SHALL NOT HAVE FASTENERS THAT PENETRATED THE DUCT
12. A GREASE DUCT SERVING THE TYPE-1 HOOD THAT PENETRATED A CEILING, WALL OR FLOOR SHALL BE ENCLOSED FROM THE FIRE POINT OF PENETRATION TO THE OUTLET TERMINAL. DUCT ENCLOSURES SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT OF THE FIRE-RESISTANCE RATED ASSEMBLY PENETRATED BUT NEED NOT EXCEED 2 HOURS.
13. PROVIDE MINIMUM 2HR INSULATION COVERING OF 2 INCHES AND SUCH MATERIAL SHALL BE IN ACCORDANCE WITH ASTM E2336. FIELD APPLIED GREASE DUCT ENCLOSURE SHALL COMPLY ALL REQUIREMENTS PER 2021 IMC SECTION 506.3.11.2.



PLACED ON PACKAGE - 6508891889

NO.	ITEM	LOCATION	QUANTITY	OPTION	FAN TYPE	TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	12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SCOPE OF WORK

1. REUSE EXISTING (1) 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FOR THE TENANT'S SPACE.

2. REUSE EXISTING 200A, 120/208V, 3-PHASE ELECTRICAL METER AND BREAKER SWITCH FOR THE TENANT'S SPACE IN THE EXISTING METER BANK.

3. REUSE EXISTING (1) 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A"(NAME TO BE CONFIRMED ON FIELD) FOR THE TENANT'S SPACE.

4. PROVIDE (1) NEW 125A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" FOR THE TENANT'S SPACE.

5. ALL NECESSARY EQUIPMENT, WIRING AND LIGHTING FOR THE PROJECT SPACE INCLUDING WIRING FOR VENTILATION EQUIPMENT. COORDINATE WITH G.C FOR LOW VOLTAGE WIRING.

ELECTRICAL PLAN NOTES

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

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

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

4. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND 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 AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.

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

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

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

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

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

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

12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.

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

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

15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.

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

17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.

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

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

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

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

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

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

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

25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND 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.L.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" OR LESS).

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

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

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

55. ALL PANELS TO BE UL LABELED 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. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.

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

ELECTRICAL LEGEND

SYMBOL

DESCRIPTION

EXHAUST FAN

COMBINATION EXHAUST FAN/LIGHT (REFER TO MECHANICAL PLANS)

JUNCTION BOX

BATTERY BACK UP EXIT LIGHT

BATTERY BACK UP EMERGENCY LIGHT

WALL SWITCH (SINGLE, DOUBLE,)

WALL SWITCH (3 WAY, 4 WAY)

WALL SWITCH (TIMER)

OCCUPANCY SENSOR WALL SWITCH

SINGLE RECEPTACLE

DUPLEX RECEPTACLE

DUPLEX RECEPTACLE, 40" TO AFF AT KITCHEN, BATHS AND TOPS

HALF SWITCHED DUPLEX RECEPTACLE

230 VOLT RECEPTACLE

QUADRUPLX RECEPTACLE

FLOOR MOUNTED, FLUSH DUPLEX RECEPTACLE

FLOOR MOUNTED, FLUSH QUAD. RECEPTACLE

FLOOR MOUNTED, FLUSH 230 VOLT RECEPTACLE

CEILING MOUNTED DUPLEX RECEPTACLE

ELECTRICAL PANEL

DISCONNECT SWITCH

USB CHARGER RECEPTACLE

TELEVISION OUTLET

TELEPHONE OUTLET

TELEPHONE/DATA OUTLET

DATA OUTLET

FLOOR MTD. FLUSH TELEPHONE/DATA OUTLET

QUAD. DATA OUTLET RJ45

NON FUSED 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.

MAKE UP AIR UNIT=MAU

BELOW COUNTER= BC

PUSH BUTTON= PB

UNDER CABINET= UC

VAPOR PROOF= VP

ELECTRICAL CONTRACTOR=E.C.

BATHROOM EXHAUST FAN=BEF

RECIRCULATION PUMP=PCP

ROOF TOP UNIT= RTU

KITCHEN EXHASUT FAN = KSF

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP WATTAGE	MOUNTING	LIGHT FIXTURE SCHEDULE NOTES:
	A	2x4 RECESSED LED LIGHT	LITHONIA LIGHTING	TBD	120	38.8 WATTS	RECESSED	REFER TO SHEET A-2 - 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.
	B	2x2 RECESSED LED LIGHT	LITHONIA LIGHTING	TBD	120	31 WATTS	RECESSED	
	C	RECESSED COMPACT LED-BLACK	LITHONIA LIGHTING	TBD	120	22.5 WATTS	RECESSED	
	D	OPEN CEILINGS CYLINDER PENDANT- BLACK	LAMP PLUS	TBD	120	40 WATTS	PENDANT	
	E	ACCENT PENDANT	VISUAL COMFORT	SK 5363NR-AI	120	75 WATTS	PENDANT	
	F	SOCO MODERN PENDANT WITH SOCO 11 PORT ROUND CANOPY	LUMENS	TBD	120	134 WATTS	PENDANT	
	G	TRACK LIGHTING	WAC LIGHTING	TBD	120	11 WATTS PER HEAD	TRACK	
	H	LED STRIP/ROPE LIGHT	TBD	TBD	120	9 WATTS PER FEET	RECESSED	
	X1	CEILING MOUNTED - EXIT SIGN	NEEDHAM LIGHTING	EXR-LED-EL-M6	120	2 WATTS	UNIVERSAL	
	X3	CEILING MOUNTED LIGHT COMBO	NEEDHAM LIGHTING	TBD	120	2 WATTS	WALL	
	Y	WAL MOUNTED EMERGENCY LIGHTS	NEEDHAM LIGHTING	EU2 LED M12	120	3.6 WATTS	WALL	
	T	TIMER WALL SWITCH	LEVITON	6124	120	-	WALL	
	OS	OCCUPANCY WALL SWITCH	LEVITON	ODS10	120	-	WALL	
	OS	CEILING OCCUPANCY SENSOR	LEVITON	O2C10-UDW	120	-	CEILING	
(E)		EXISTING LIGHTING FIXTURE 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.

BUILDING EXTERIOR

TENANT'S SPACE

PROPOSED FLOOR

ELECTRICAL RISER KEYED NOTES:

1

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

2

EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL INCOMING SERVICE FEEDER TO THE ELECTRICAL PANEL "A"(NAME TO BE VERIFY ON FIELD) FOR THE TENANT'S SPACE FROM THE EXISTING ELECTRICAL METER BANK. E.C SHALL GET INFORMATION ABOUT THE EXISTING POWER DISTRIBUTION PRIOR TO COMMENCING ANY WORK AND INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES. E.C SHALL VERIFY THE OPERABLE CONDITION OF EXISTING FEDDER, REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

3

EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" (NAME TO BE CONFIRMED ON FIELD) TO REMAIN. E.C TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

4

NEW 125A(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

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.

ELECTRICAL RISER

SCALE

N.T.S.

1

LIGHTING PLAN GENERAL NOTES:

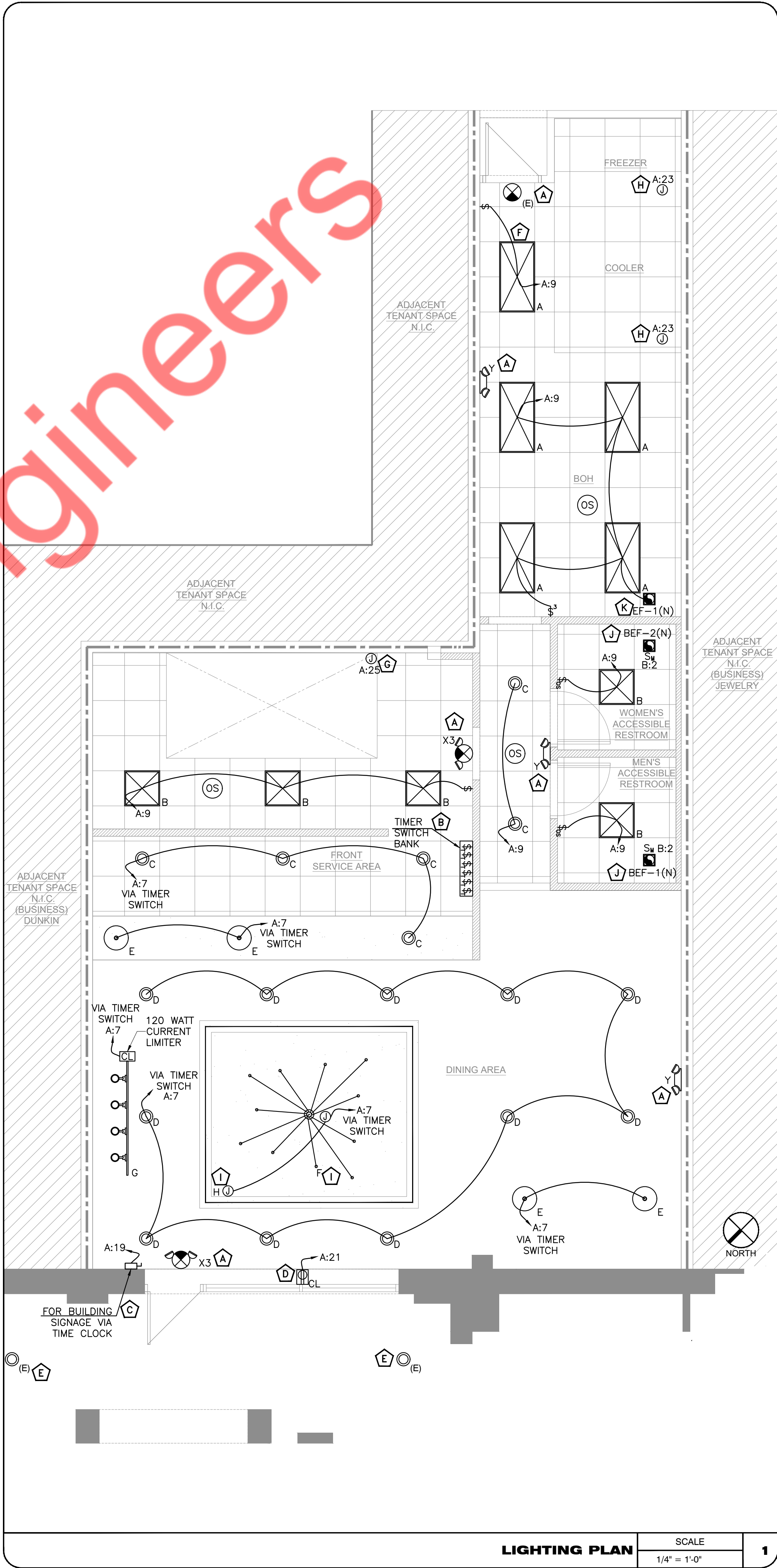
1. CONTRACTOR ADVISED TO UPDATE THE EMERGENCY LIGHT FIXTURES LOCATIONS/QUANTITY PER SITE REQUIREMENT UP ON FINAL INSPECTION OR PER LOCAL AHJ REQUIREMENT.
2. PROVIDE MANUAL OVERRIDE SWITCH AS PER IECC C405.2.2.1
3. (E) IN THE PLAN INDICATES EXISTING TO REMAIN.

LIGHTING PLAN KEYED NOTES:

- (A) CONNECT EMERGENCY AND EGRESS LIGHTING FIXTURES TO THE NEAREST LIGHTING CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES.
- (B) COORDINATE EXACT LOCATION OF THE TIMER SWITCH BANK WITH OWNER/ARCHITECT.
- (C) PROVIDE DISCONNECT SWITCH, TIMER AND OTHER ELECTRICAL CONNECTIONS FOR EXTERIOR SIGN. E.C. SHALL COORDINATE EXACT POWER REQUIREMENT, LOCATION AND MOUNTING DETAILS WITH OWNER/LANDLORD & SIGN VENDOR.
- (D) PROVIDE SHOW WINDOW RECEPTACLE AS PER N.E.C. 210.62. VERIFY EXACT LOCATION WITH ARCHITECT.
- (E) EXISTING LIGHT FIXTURE IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO THE HOUSE ELECTRICAL PANEL ALONG WITH THEIR CONTROLS. E.C. SHALL VERIFY THE CONTROLS IN FIELD AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- (F) LIGHTING NEAR ELECTRICAL PANELS SHALL NOT BE CONTROLLED BY ANY AUTOMATIC MEANS AND SHALL BE COMPLIED AS PER NEC 110.26(D).
- (G) PROVIDE 120V DEDICATED CIRCUIT FOR NEW HOOD LIGHTING & CONTROL PANEL. COORDINATE FOR LIGHTING CONNECTION & ALL OTHER REQUIREMENT WITH CAPTIVE AIRE HOOD DRAWINGS/MANUFACTURER IN FIELD.
- (H) E.C. SHALL PROVIDE JUNCTION BOX AND CIRCUIT FOR WALK-IN BOX FREEZER/COOLER. LIGHTING TO BE PROVIDED BY WALK IN BOX MANUFACTURER. COORDINATE WITH WALK IN BOX MANUFACTURER FOR LIGHTING CONNECTIONS AND OTHER REQUIREMENTS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- (I) E.C. SHALL COORDINATE FOR EXACT LOCATION AND POWER REQUIREMENT WITH LIGHT VENDOR/OWNER BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
- (J) EXHAUST FAN BEF-1(N) & BEF-2(N) SHALL BE INTERLOCKED WITH RTU-1(E). E.C. SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR IN THE FIELD.
- (K) EXHAUST FAN EF-1(N) SHALL BE INTERLOCKED WITH LIGHTS IN THE SAME ROOM. E.C. SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR IN THE FIELD.

LV PLAN GENERAL NOTE:

1. E.C TO COORDINATE WITH G.C./ LOW VOLTAGE VENDOR FOR EXACT QUANTITY AND POWER REQUIREMENTS FOR LOW VOLTAGE EQUIPMENTS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.



1. 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.
2. E.C. SHALL COORDINATE WITH THE EQUIPMENT VENDOR FOR EXACT POWER & RECEPTACLE/OUTLETS REQUIREMENT AND WITH ARCHITECT/OWNER FOR EXACT LOCATION AND MOUNTING HEIGHT OF THE RECEPTACLES IN THE FIELD.
3. (E) IN THE PLAN INDICATES EXISTING TO REMAIN.

A EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" TO REMAIN IN PLACE TO BE CONFIRMED ON FIELD). E.C TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

B NEW 125A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

C 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.

D PROVIDE (2) CAT 6 HOME RUN TO EACH POS AND ONE (1) QUAD 20 AMPS RECEPTACLE FOR POS. COORDINATE WITH OWNER PRIOR TO ROUGH-IN FOR EXACT HEIGHT.

E ELECTRICAL CONTRACTOR TO CO-ORDINATE WITH WALK IN COOLER/FREEZER VENDOR FOR ITS POWER REQUIREMENT AND OTHER DETAILS BEFORE COMMENCING AND WORK. BASE BID ACCORDINGLY.

F ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF THE MECHANICAL UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.

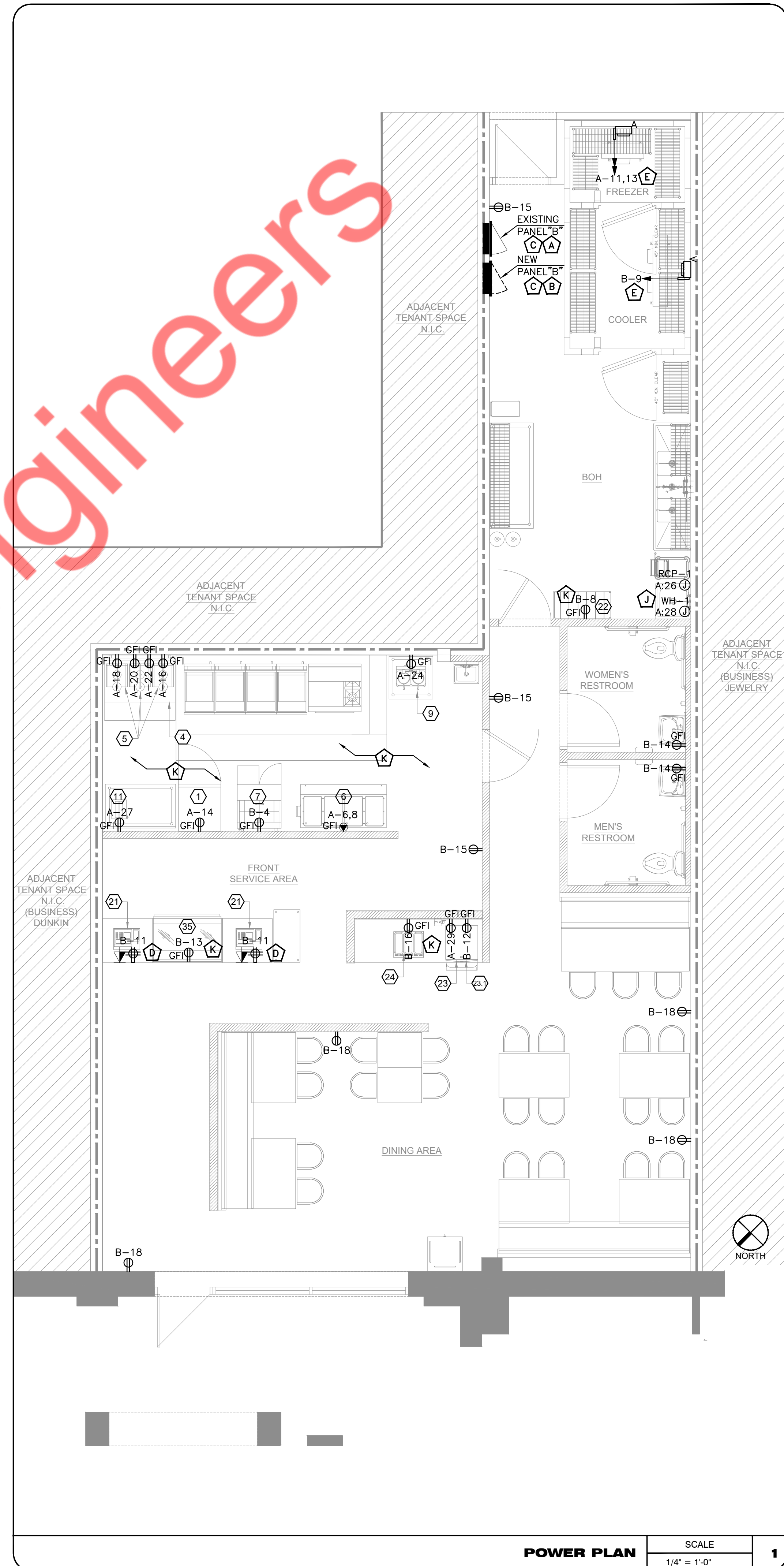
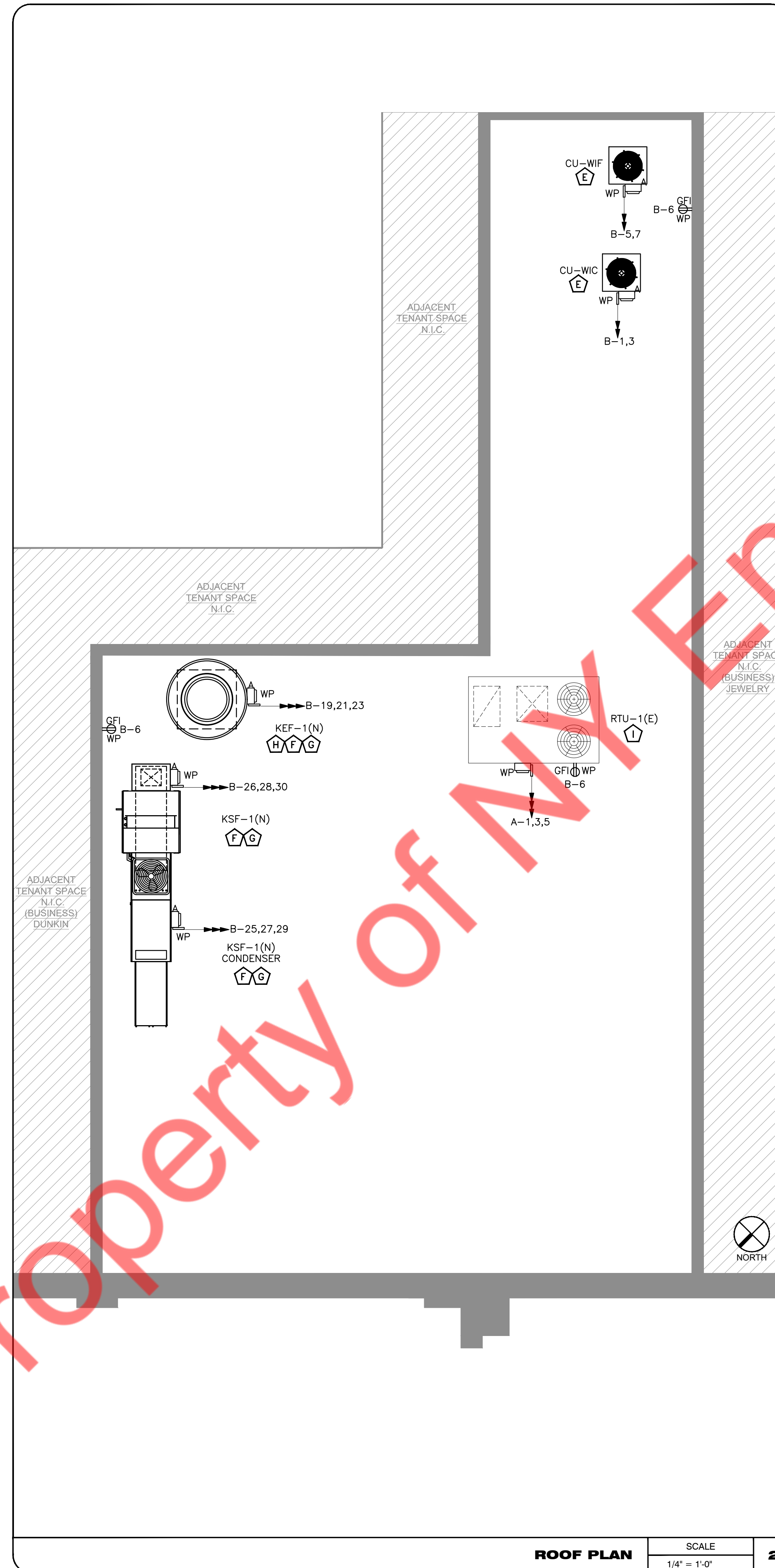
G ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES

H KEF-1(N) SHALL BE INTERLOCKED WITH KSF-1(N). E.C. SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH IN.

I EXISTING RTU-1(E) UNIT ALONG WITH ITS ELECTRICAL FIXTURES SHALL REMAIN AND SHALL REMAIN CONNECTED TO THE EXISTING ELECTRICAL PANEL "A". E.C. SHALL VERIFY THE OPERABLE CONDITION OF THE EXISTING BRANCH CIRCUIT AND PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY."

J ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT FOR THE WATER HEATER AND RE-CIRCULATION PUMP IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED. BASE BID ACCORDINGLY.

K ELECTRICAL CONTRACTOR SHALL CO-ORDINATE WITH EQUIPMENT MANUFACTURER/VENDOR FOR EXACT POWER REQUIREMENT AND OTHER DETAILS BEFORE COMMENCING AND WORK. BASE BID ACCORDINGLY.



ELECTRICAL PANEL SCHEDULE:-

PANEL: A (E)										MOUNTING: RECESSED						
208Y/120	VOLTS,		3	PHASE,		4	WIRE		AIC RATING		10KAIC		PANEL LOCATION: BOH			
MAIN CB: NA		MLO: 225A		BUS: 225A		MIN,		FED FROM: EXISTING METER/DISCONNECT								
NOTE:																
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD		LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
1	60-3P	RTU-1(E)		H	6.56	EXISTING	6.56	B					SPARE	40-2P	2	
3				H	6.56			6.56				4				
5				H	6.56				8.05					6		
7	20	LIGHTING- DINING AREA, FRONT SERVICE AREA		L	0.65	2#12, #12G, 3/4"C	2.15			2#12, #12G, 3/4"C	1.50	E	TABLE HOT FOOD_#6	20-2P	8	
9	20	LIGHTNG- RESTROOMS, PREP AREA,BOH,HALLWAY		L	0.60	2#12, #12G, 3/4"C		0.60					SPARE	30-2P	10	
11	20-2P	WALK IN FREEZER EVAPORATOR_#14.4		O	0.96	2#12, #12G, 3/4"C			0.96							12
13				O	0.96		1.78				2#12, #12G, 3/4"C	0.82		E	REACH-IN FREEZER_#1	20
15	40-2P	SPARE						0.82		2#12, #12G, 3/4"C	0.82	E	REFRIGERATOR_#4	20	16	
17								0.50	2#12, #12G, 3/4"C	0.50	E	HEAT LAMP/INFRAREDSTRIP_#5	20	18		
19	20	LIGHTING- EXTERIOR SIGNAGE/TIME CLOCK		L	0.50	2#12, #12G, 3/4"C	1.00			2#12, #12G, 3/4"C	0.50	E	HEAT LAMP/INFRAREDSTRIP_#5	20	20	
21	20	SHOW WINDOW RECEPTACLE		L	1.00	2#12, #12G, 3/4"C		1.50		2#12, #12G, 3/4"C	0.50	E	HEAT LAMP/INFRAREDSTRIP_#5	20	22	
23	20	WALK IN COOLER/FREEZER LIGHTS		L	0.50	2#12, #12G, 3/4"C			2.30	2#12, #12G, 3/4"C	1.80	E	WAFFLE BAKER_#9	20	24	
25	20	HOOD LIGHTS/CONTROL PANEL		L	0.50	2#12, #12G, 3/4"C	0.59			2#12, #12G, 3/4"C	0.09	O	RCP	20	26	
27	20	TOASTER_#11		E	1.80	2#12, #12G, 3/4"C		2.28		2#12, #12G, 3/4"C	0.48	O	WH-1	20	28	
29	20	DISPENSER,ICE BEVERAGE_#23		E	0.19	2#12, #12G, 3/4"C			0.19				SPACE		30	
31		SPACE					0.00						SPACE		32	
33		SPACE						0.00					SPACE		34	
35		SPACE							0.00				SPACE		36	
37		SPACE					7.11			4#3, #8G, 1 1/4"C	7.11	O	PANEL-B(N)		38	
39		SPACE						7.11			7.11	O			40	
41		SPACE							7.11		7.11	O			42	
TOTAL CONNECTED LOAD (KVA)							19.19	18.87	19.12							

PANEL: B (N)										MOUNTING: RECESSED					
208Y/120	VOLTS,		3	PHASE,		4	WIRE	AIC RATING		10KAIC	PANEL LOCATION: BOH				
MAIN CB:		NA		MLO:	125A		BUS:	125A		MIN,		FED FROM: PANEL-A(E.)			
NOTE:															
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	C							
1	20-2P	WALK IN COOLER CONDENSING UNIT_#14.1	O	1.20	2#12, #12G, 3/4"C	1.24			2#12, #12G, 3/4"C	0.04	M	BEF-1(N), BEF-2(N),	20	2	
3			O	1.20			1.64			0.44	E	REFRIGERATOR SANDWICH / SALAD PREP_#7	20	4	
5	20-2P	WALK IN FREEZER CONDENSING UNIT_#14.3	O	1.20	2#12, #12G, 3/4"C			1.74	2#12, #12G, 3/4"C	0.54	R	RECEPTACLE-ROOF	20	6	
7			O	1.20		2.24				1.04	E	BAG IN BOX_#22	20	8	
9	20	WALK IN COOLER EVAPORATOR_#14.2	O	0.30	2#12, #12G, 3/4"C		0.49		2#12, #12G, 3/4"C	0.19	E	DISPENSER, ICE BEVERAGE_#23	20	10	
11	20	POS#21	R	0.72	2#12, #12G, 3/4"C			2.08	2#12, #12G, 3/4"C	1.36	E	ICE MAKER_#23.1	20	12	
13	20	DISPLAY REFRIGERATOR_#35	R	0.13	2#12, #12G, 3/4"C	0.49			2#12, #12G, 3/4"C	0.36	R	RESTROOM RECEPTACLES	20	14	
15	20	RECEPTACLES GENERAL	R	0.54	2#12, #12G, 3/4"C		1.56		2#12, #12G, 3/4"C	1.02	E	DISPENSER, BEVERAGE/CARBONATED_#24	20	16	
17	20	SPARE						0.72	2#12, #12G, 3/4"C	0.72	R	RECEPTACLES GENERAL	20	18	
19	20-3P	KEF-1(N)	H	0.78	3#12, #12G, 3/4"C	0.78						SPARE	20	20	
21			H	0.78			0.78			SPARE	20	22			
23			H	0.78				0.78			SPARE	20	24		
25	20-3P	KSF-1(N) CONDENSER	H	1.74	3#12, #12G, 3/4"C	2.74			3#12, #12G, 3/4"C	1.00	H	KSF-1(N)	15-3P	26	
27			H	1.74			2.74			1.00	H			28	
29			H	1.74				2.74		1.00	H			30	
TOTAL CONNECTED LOAD (KVA)						7.49	7.21	8.05							

EQUIPMENT SCHEDULE:-

EQUIPMENT SCHEDULE						
ITEM NO.	DESCRIPTION	VOLTAGE	PHASE	AMPS	KVA	REMARK
1	FREEZER REACH-IN	115	1	7.10	0.82	
4	REFRIGERATOR	115	1	2.40	0.28	
5	HEAT LAMP/INFRARED STRIP	120	1	4.20	0.50	
6	TABLE,HOT FOOD	208	1	14.40	3.00	
7	REFRIGERATOR SANDWICH / SALAD PREP	115	1	3.80	0.44	
9	WAFFLE BAKER	120	1	15.00	1.80	
11	TOASTER, CONTACT GRILL, CONVEYOR TYPE	120	1	15.00	1.80	
14.1	CONDENSING UNIT, COOLER	208	1	11.53	2.40	CONFIRM WITH VENDOR
14.2	LOW PROFILE EVAPORATOR COOLER	120	1	2.50	0.30	CONFIRM WITH VENDOR
14.3	CONDENSING UNIT,FREEZER	208	1	11.53	2.40	CONFIRM WITH VENDOR
14.4	LOW PROFILE EVAPORATOR FREEZER	208	1	9.23	1.92	CONFIRM WITH VENDOR
22	BAG IN BOX	115	1	8.69	1.00	CONFIRM WITH VENDOR
23	DISPENSER, ICE/BEVERAGE	115	1	1.58	0.18	CONFIRM WITH VENDOR
23.1	ICE MAKER	115	1	11.30	1.30	
24	DISPENSER, BEVERAGE/CARBONATED	120	1	8.50	1.02	
35	DISPLAY REFRIGERATOR/COOLER	120	1	1.10	0.13	CONFIRM WITH VENDOR

PANEL SCHEDULE GENERAL NOTES:

- A. ALL THE CIRCUITING SHOWN FOR THE EXISTING PANEL "A" IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY CIRCUITING OF THE EXISTING DEVICES IN FIELD AND INFORM ENGINEER FOR DISCREPANCIES. ALL THE NEWLY ADDED CIRCUIT BREAKERS IN THE EXISTING ELECTRICAL PANEL "A" SHALL BE COMPATIBLE WITH THE PANEL.
- 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. CHECK COMPATIBILITY OF NEWLY ADDED BREAKER WITH THE EXISTING PANEL BEFORE PURCHASING. BASE BID ACCORDINGLY.

ELECTRICAL PANEL SCHEDULE KEYED WORK NOTE:

- A** PROVIDE (1) 100A/3P BREAKER IN PLACE OF EXISTING (3) SPACES.
- B** PROVIDE (1) 20/1P BREAKER IN PLACE OF EXISTING (1) SPACE.

SCOPE OF WORK


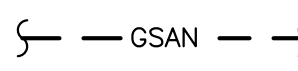
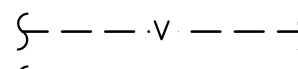


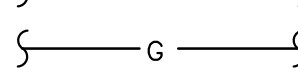
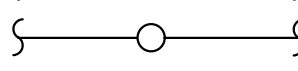
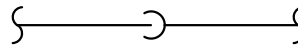

PROVIDE ALL PLUMBING FOR A NEW FAST-CASUAL RESTAURANT WITHIN AN EXISTING BUILDING SHELL, INCLUDING ALL WATER, GAS, VENT, GREASE & SANITARY LINES AND CONNECT TO EXISTING UTILITIES. PROVIDE NEW GAS FIRED TANKLESS WATER HEATER & INTERIOR GREASE INTERCEPTOR.

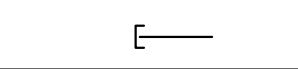
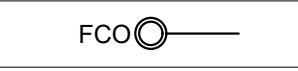
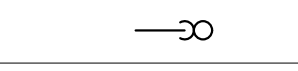
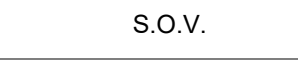
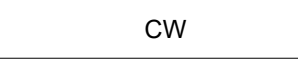
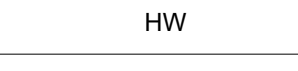




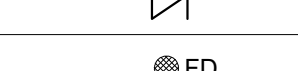






COORDINATE WITH G.C. & MECHANICAL CONTRACTOR FOR ANY REQUIRED CONDENSATE DRAIN LINES.

PLUMBING NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
- 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.
- ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
- PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
- ALL MATERIALS SHALL BE NEW.
- 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.
- REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- 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.
- DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
- 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.
- VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
- EXPPOSED 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.
- SOIL, WASTE AND VENT PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
- ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
- DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
- ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
- 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.
- 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 CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
- NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
- NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
- 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.
- 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.
- PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
- NO JOINTS UNDERGROUND FOR COPPER.
- PLUMBING FIXTURES SHALL COMPLY WITH NATIONAL STANDARD PLUMBING CODE 2021, NEW JERSEY EDITION.
- WATER HAMMER ARRESTORS AS PER NATIONAL STANDARD PLUMBING CODE 2021, NEW JERSEY EDITION.
- PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
- PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
- CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE.
- OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

PLUMBING LEGENDS

	SANITARY SEWER PIPING (UNDERGROUND)
	GREASE SANITARY SEWER PIPING (UNDERGROUND)
	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
	GAS PIPING
	PIPE RISE
	PIPE DROP

	CAPPED END OF PIPE
	FLOOR CLEAN OUT
	P-TRAP
	SHUT - OFF VALVE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	WALL CLEAN OUT
	GATE VALVE
	GAS COCK
	CHECK VALVE
	FLOOR DRAIN
	INDIRECT WASTE
	GREASE INTERCEPTOR
	BALANCING VALVE
	FLOOR SINK
	THERMOSTATIC MIXING VALVE

FIXTURE BRANCH SCHEDULES

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

ENERGY CONSERVATION NOTES

- AS PER ASHRAE 90.1-2019 SECTION 7.4.2, SERVICE WATER HEATING EQUIPMENT MEETS EFFICIENCY REQUIREMENTS.
- AS PER ASHRAE 90.1-2019 SECTION 7.4.4.2, SYSTEMS DESIGNED TO MAINTAIN USAGE TEMPERATURES IN HOT-WATER PIPES, SUCH AS RECIRCULATING HOT-WATER SYSTEMS OR HEAT TRACE, SHALL BE EQUIPPED WITH AUTOMATIC TIME SWITCHES OR OTHER CONTROLS THAT CAN BE SET TO SWITCH OFF THE USAGE TEMPERATURE MAINTENANCE SYSTEM DURING EXTENDED PERIODS WHEN HOT WATER IS NOT REQUIRED.
- 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.

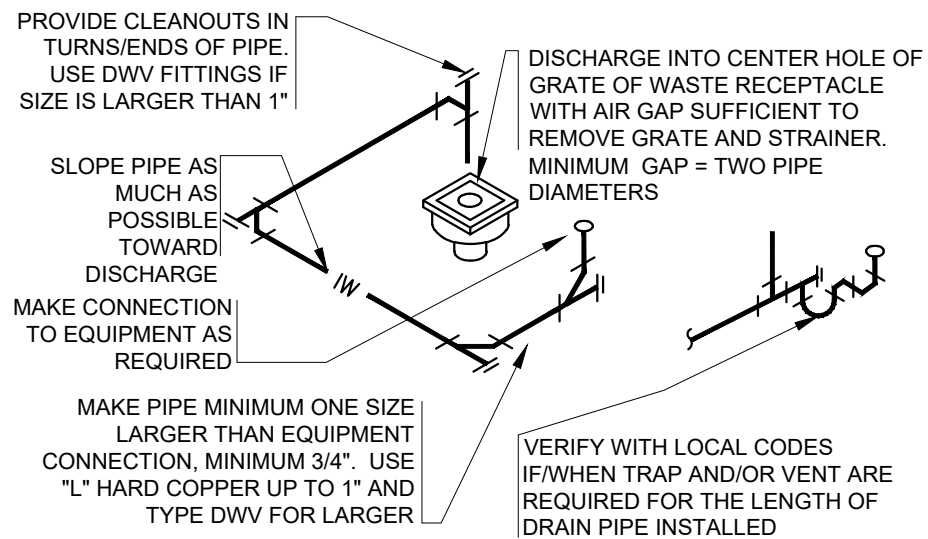
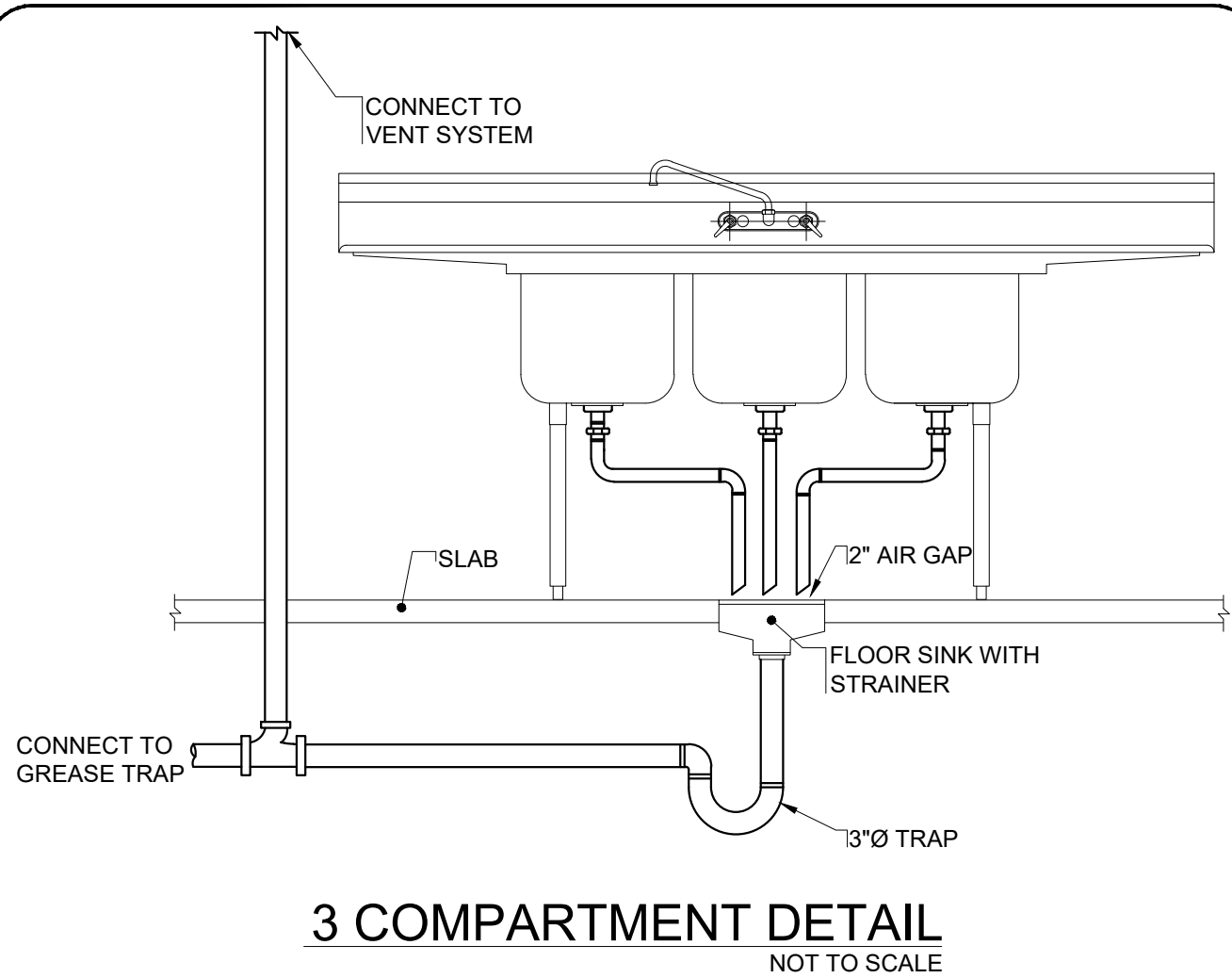
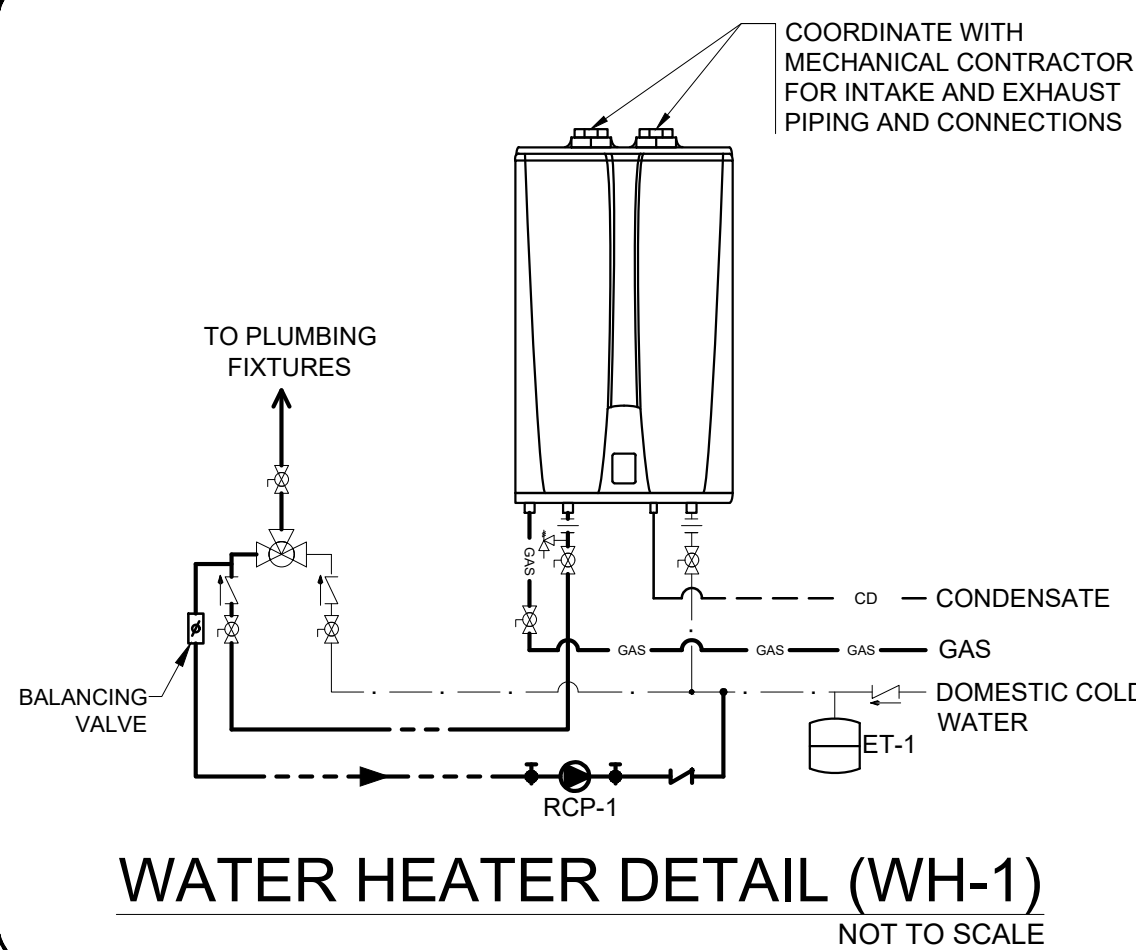
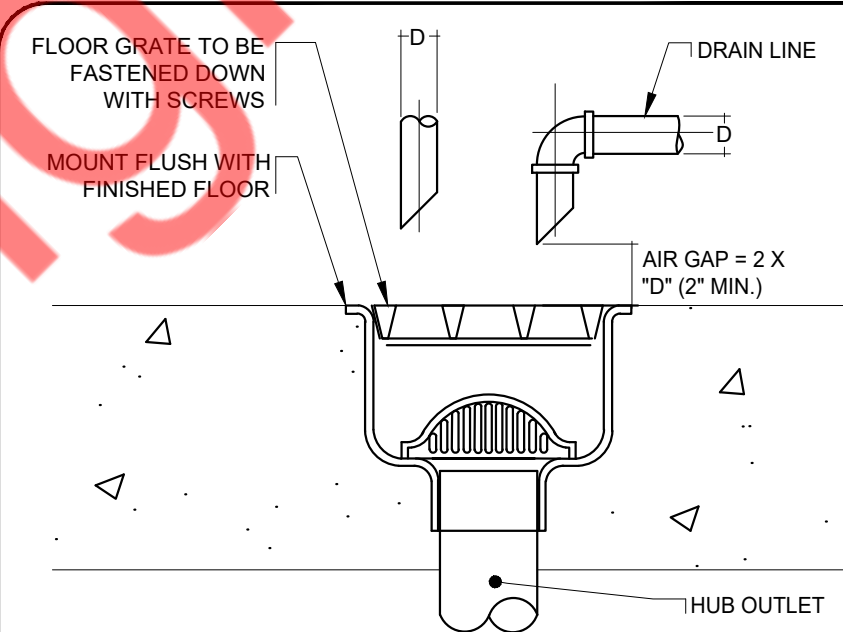
RESTROOM FIXTURE SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER		WASTE		Spec
					Hot	Cold	Waste	Usage	
A	2	WATER CLOSET	AMERICAN STANDARD	270CA.101.020			1/2"	4"	1.28 GPF
	2	ELONGATED SEAT	AMERICAN STANDARD	EXTRA HD COMMERCIAL TOILET SEAT					
B	2	LAVATORY	AMERICAN STANDARD	9024.004EC.020			2"		
C	2	LAVATORY FAUCET	AMERICAN STANDARD	7500.174.002	1/2"	1/2"		0.35	GPM
TMV	2	THERMAL MIXING VALVE	WATTS	LFMMV	1/2"	1/2"			
	2	INSULATED PLUMBING COVERS	PLUMBEREX	HANDI SHIELD					

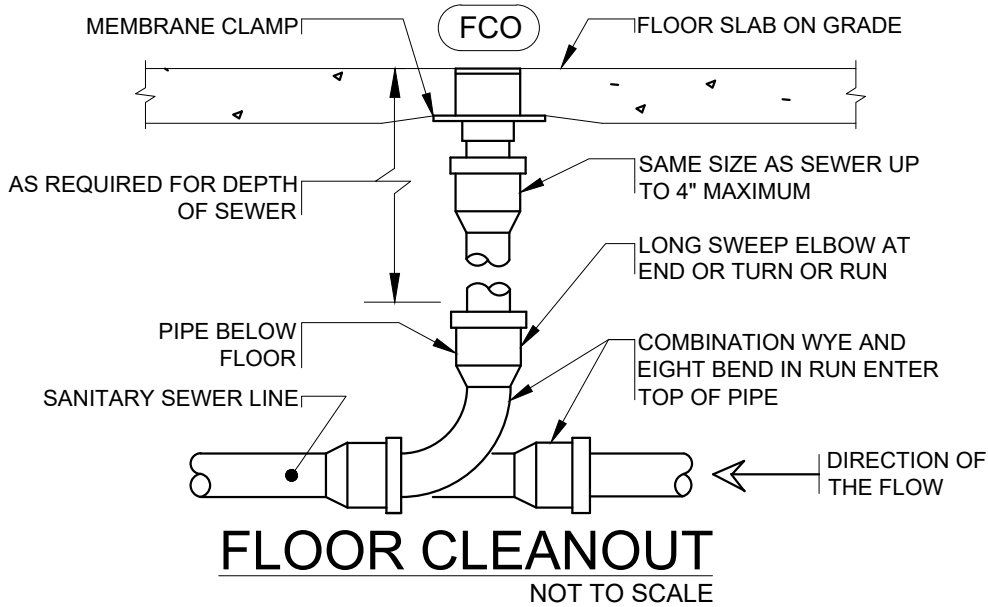
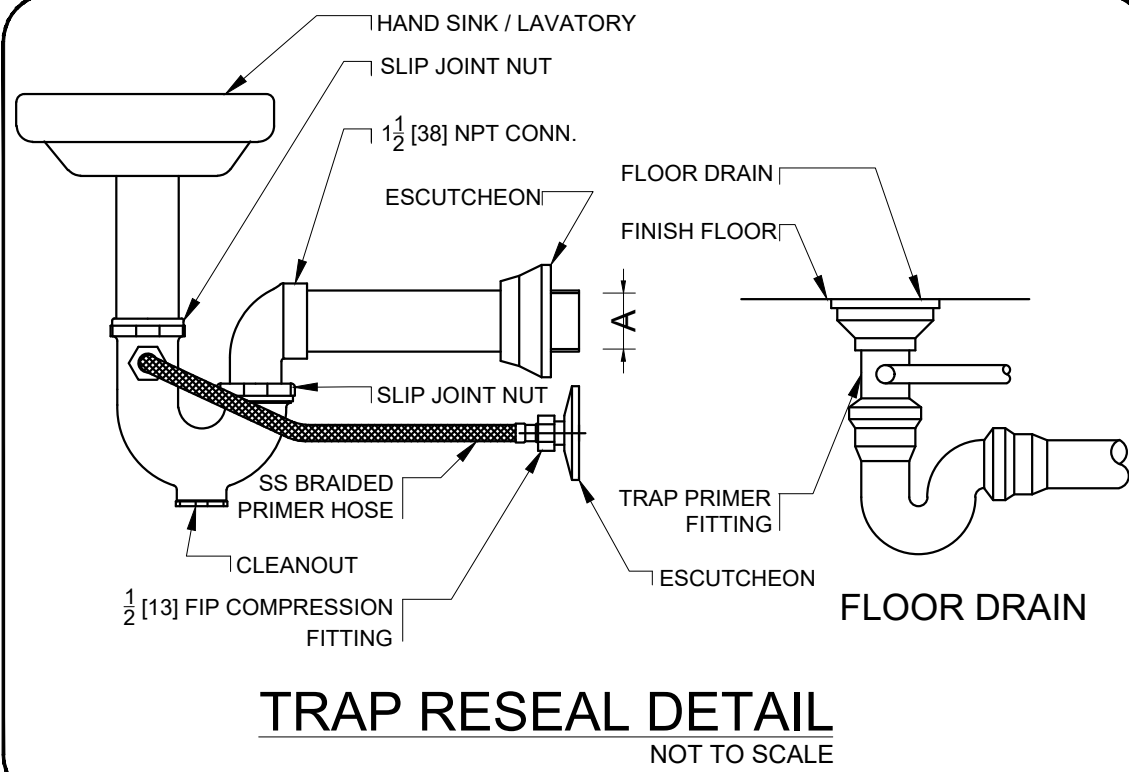
KITCHEN EQUIPMENT PLUMBING SCHEDULE

Item No.	Qty.	Description	Manufacturer	Model	WATER		WASTE	
					Hot	Cold	Direct	Indirect
2	4	FRYER, DEEP FAT, GAS	GLOBE	GFF80G				
12	1	3 COMPARTMENT SINK	JOHN BOOS	3B16204-2D18				(3)2"
12.1	1	PRE-RINSE FAUCET, WALL MOUNT	KROWNE	17-109WL	1/2"+	1/2"		
13	1	HAND SINK WALL MOUNT	JOHN BOOS	PBHS-W-1410-P-SSLR	1/2"++	1/2"	2"	
16	1	MOP SINK	E.L. MUSTEE	63M			3"	
16.1	1	SERVICE SINK FAUCET	KROWNE	16-127	1/2"+	1/2"		
22	1	BAG-IN-BOX RACK	BY OWNER	BY OWNER		1/2"		
23	1	DISPENSER, ICE/BEVERAGE	BY OWNER	BY OWNER		1/2"		
23.1	1	ICE MAKER	MANITOWOC ICE	IY T0420A		1/2"		3/4"
23.2	1	FILTER SYSTEM, ICE MAKER	EVERPURE	FXI-11		1/2"		
FS	3	FLOOR SINKS	ZURN	Z1900-23-31 (ZS1900 IF IN EXPOSED AREAS)			3"	
FD	5	FLOOR DRAINS*	ZURN	ZS415 W/ TYPE BS STRAINER			3"/4"	
TMV	1	THERMAL MIXING VALVE	WATTS	LFMMV	1/2"	1/2"		

+ HOT WATER 140°F, ++ PROVIDE TMV AS PER SCHEDULE, *PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS

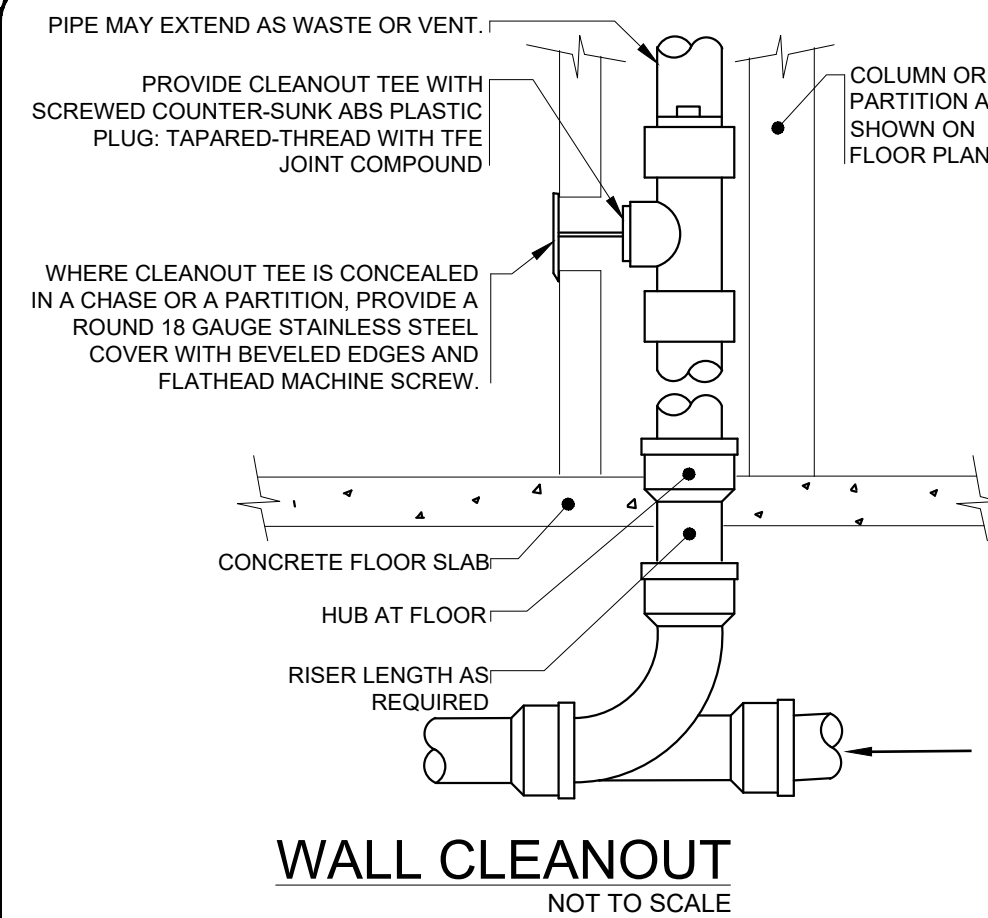


INDIRECT WASTE DETAIL
NOT TO SCALE



FLOOR CLEANOUT DETAIL NOTES

- LOCATE CLEANOUT AT THIS LOCATIONS:
 - BUILDING EXIT
 - AT TURNS OF PIPES GREATER THAN 45 DEGREES
 - AT 90° INTERVALS ON STRAIGHT RUNS
 - WHERE IS SHOWN ON PLANS
 - WHERE IS 18" CLEAR AROUND



WALL CLEANOUT DETAIL NOTES

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

GREASE INTERCEPTOR SCHEDULE					
ITEM	SERVICE	FLOW CAPACITY (GPM)	GREASE CAPACITY (LBS)	LIQUID CAPACITY (GALLONS)	MANUFACTURER AND MODEL
GREASE INTERCEPTOR (GI)	KITCHEN EQUIPMENTS	75	861	125	SCHIER GB-75
NOTE:-					
1. CONTRACTOR TO PROVIDE ALL REQUIRED ACCESSORIES FOR SATISFACTORY WORKING OF GREASE TRAP AS PER SITE CONDITIONS.					
2. CONTRACTOR SHALL SUBMIT PROPOSED GREASE INTERCEPTOR INSTALLATION PLANS AND SPECIFICATIONS TO LOCAL AUTHORITIES FOR THEIR APPROVAL BEFORE ACQUISITION.					

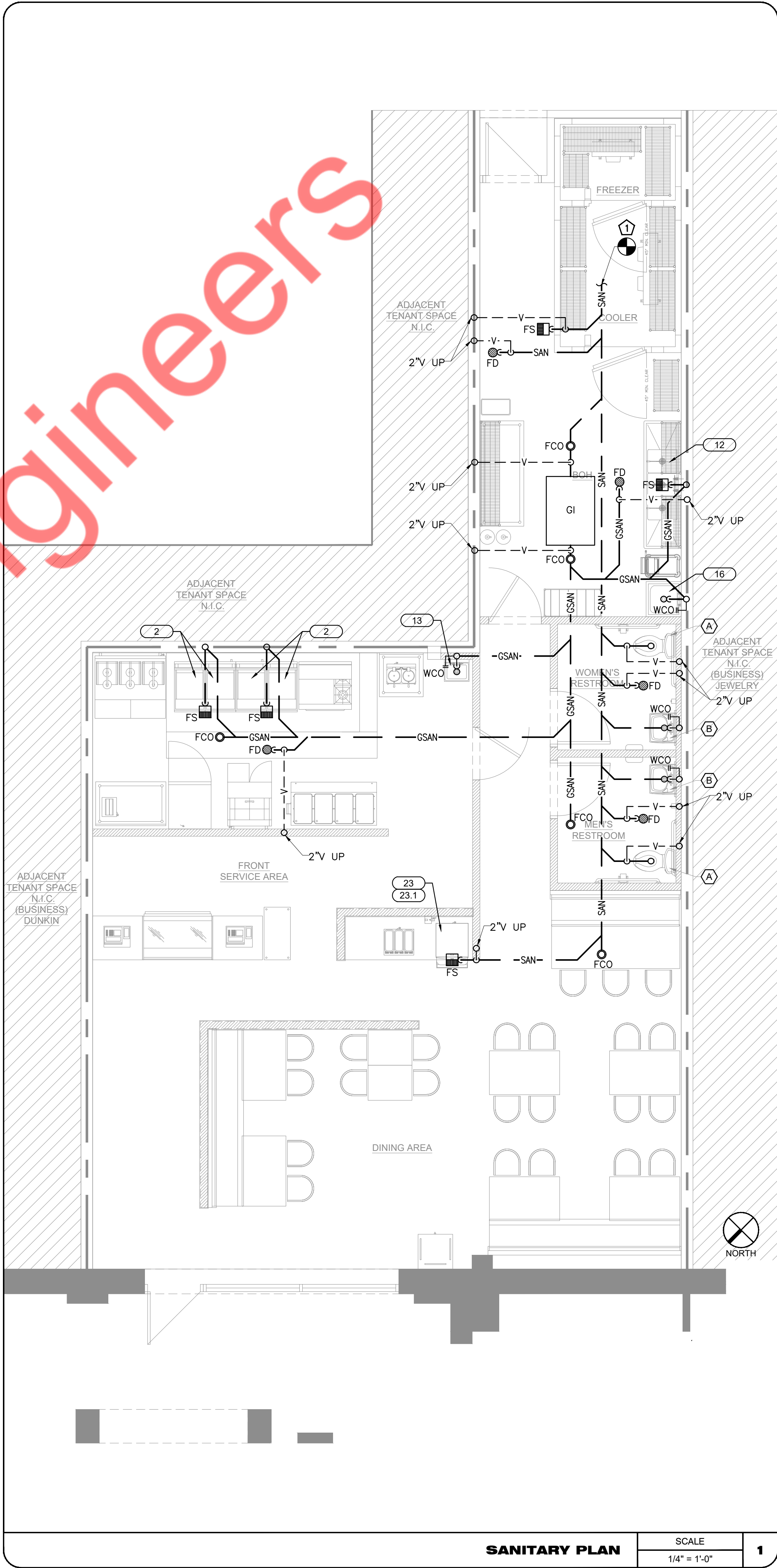
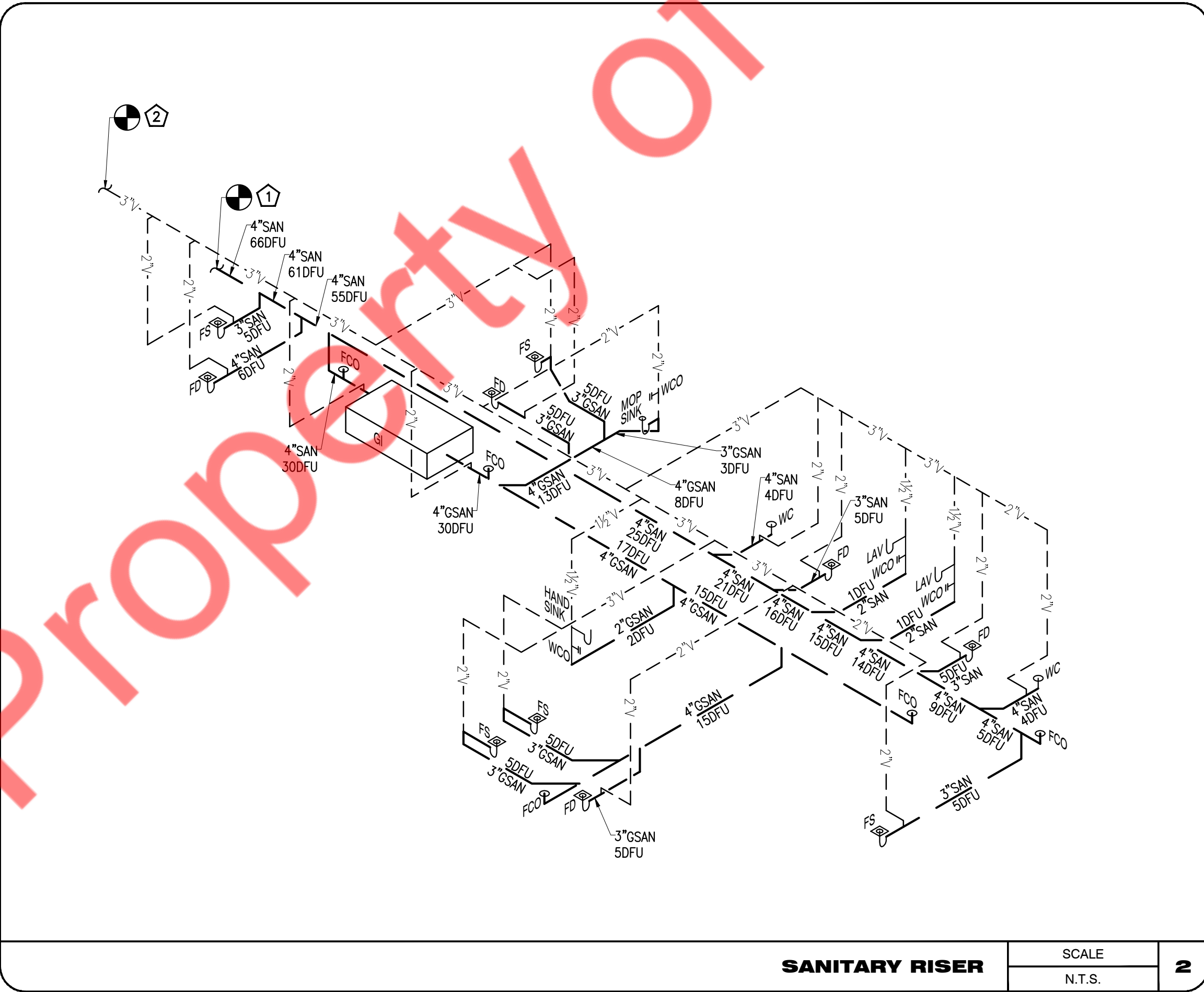
GREASE INTERCEPTOR SIZING									
TAG	DESCRIPTION	QTY	DIMENSIONS			VOLUME		%USAGE	GPM
			LENGTH	WIDTH	DEPTH	CU.IN	GALLONS		
12	3 COMP SINK	01	16	20	14	13,440	58.18	0.75	43.63
13	HAND SINK	01	14	10	5	700	3.03	0.75	2.27
16	MOP SINK	01	24	24	10	5,760	21.93	0.75	18.70
TOTAL GPM									64.60
PROPOSED GREASE INTERCEPTOR (GI) MODEL									SCHIER GB-75

SANITARY PLAN & RISER KEY NOTES

1. EXTEND & CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY MAIN LINE IN SPACE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, ROUTING AND INVERT OF EXISTING SANITARY MAIN LINE AND MAKE NECESSARY CHANGES/UPGRADE EXISTING SANITARY LINE IF REQUIRED.
2. EXTEND & CONNECT NEW 3" VENT PIPING TO EXISTING VENT LINE IN SPACE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY EXACT SIZE & LOCATION OF EXISTING VENT LINE AND MAKE NECESSARY CHANGES/UPGRADE EXISTING VENT LINE IF REQUIRED.

GENERAL NOTES

1. SLOPE OF DRAINAGE PIPING SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" AND 1/4" PER FOOT OF RUN FOR PIPE 2" AND SMALLER. VENT PIPING SHALL BE PITCHED TO DRAIN.
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. ALL CLEANOUTS TO BE ACCESSIBLE.
5. CONTRACTOR TO PROPERLY CAP ALL EXISTING PIPING FROM EXISTING PLUMBING FIXTURE WHICH ARE NOT IN USE/DEMOLISHED/NOT SHOWN IN DRAWINGS.



RECIRCULATION PUMP SCHEDULE

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

NOTE:

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

WATER HEATER SCHEDULE

MANUFACTURER	NORITZ
MODEL	NCC300DV
EQUIPMENT TAG	WH-1
STATUS	NEW
QUANTITY	1
CAPACITY	TANKLESS
FUEL	GAS
BTU/HR	300,000
FLOW RATE	5.8 GPM*
THERMAL EFFICIENCY	97%
AIR INTAKE / EXHAUST VENT	4"Ø / 4"Ø
VOLTAGE	120/1/60
AMPERAGE	<4

NOTES:

- * @ 100°F TEMPERATURE RISE.
- INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-5C-DD. TANK VOLUME - 2 GALLONS, PER LOCAL CODE REQUIREMENTS.

WATER SUPPLY PLAN & RISER KEY NOTES

- CONNECT NEW 1" CW LINE TO EXISTING WATER MAIN LINE IN SPACE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY SIZE AND LOCATION OF EXISTING CW PIPING AND UPGRADE IF REQUIRED.
- NO TAP OFF TO BE TAKEN BEFORE BFP.
- CONTRACTOR TO COORDINATE WITH OWNER/EQUIPMENT SUPPLIER FOR THE REQUIREMENT OF WATER SUPPLY CONNECTION TO THE BAG-IN-BOX AND PROVIDE CW ACCORDINGLY.

GENERAL NOTES

- CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER ASHRAE 90.1-2019 (REFER SHEET P-1).
- PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
- PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR & SHUT-OFF VALVES AS REQUIRED.
- NEW WATER HEATER DRAIN SPILLS TO MOP SINK.
- CONTRACTOR TO PROPERLY CAP ALL EXISTING PIPING FROM EXISTING PLUMBING FIXTURE WHICH ARE NOT IN USE/DEMOLISHED/NOT SHOWN IN DRAWINGS.

FIXTURE FACTOR VALUE *

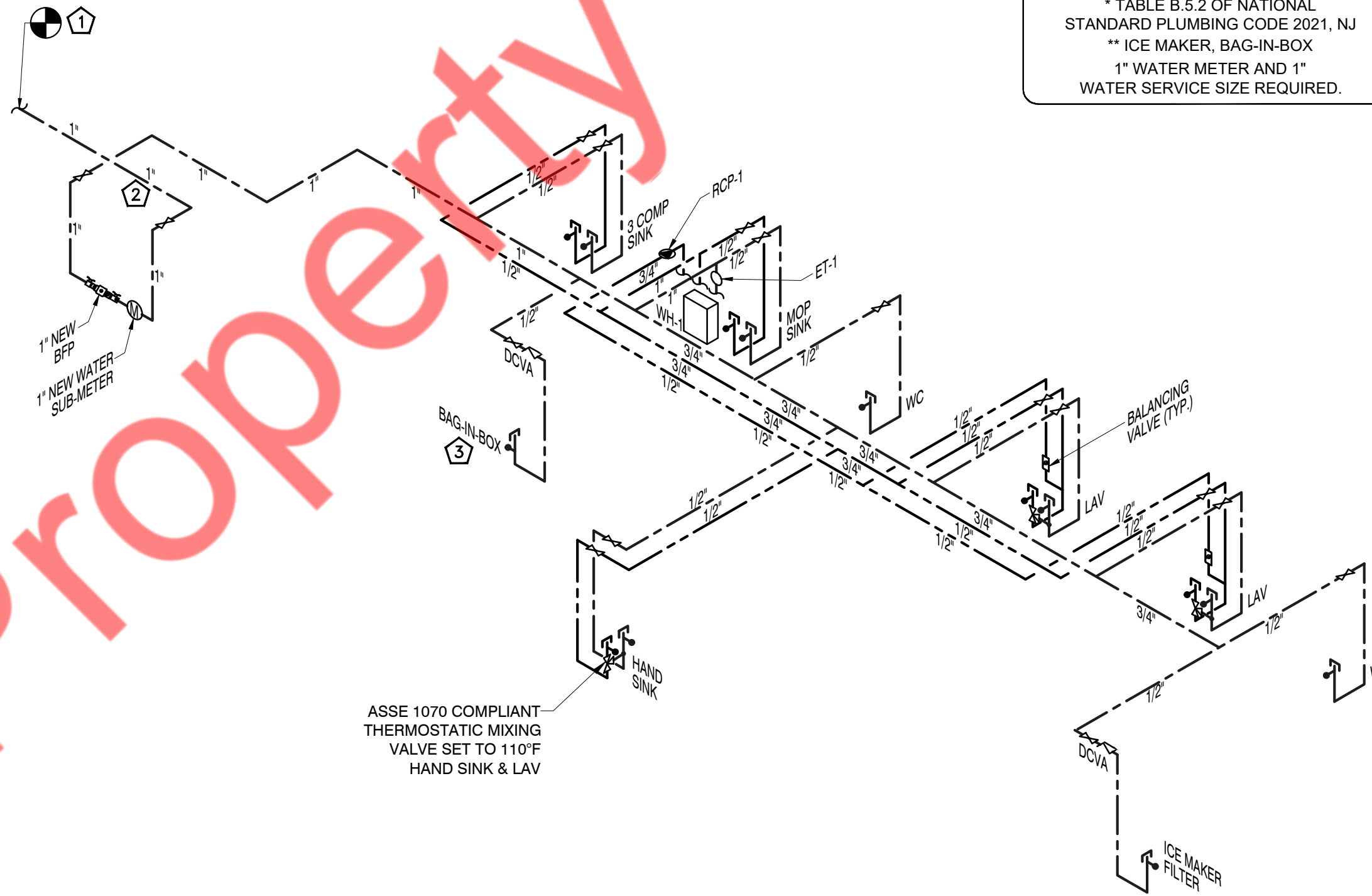
1 HAND SINK @ 1.0	= 1.0
1 3-COMP SINK @ 1.5	= 1.5
1 MOP SINK @ 3.0	= 3.0
2 WATER CLOSET @ 2.5	= 5.0
2 LAVATORY @ 1.0	= 2.0
2 *MISC @ 0.5	= 1.0
TOTAL	= 13.5

* TABLE B.5.2 OF NATIONAL STANDARD PLUMBING CODE 2021, NJ

** ICE MAKER, BAG-IN-BOX

1" WATER METER AND 1"

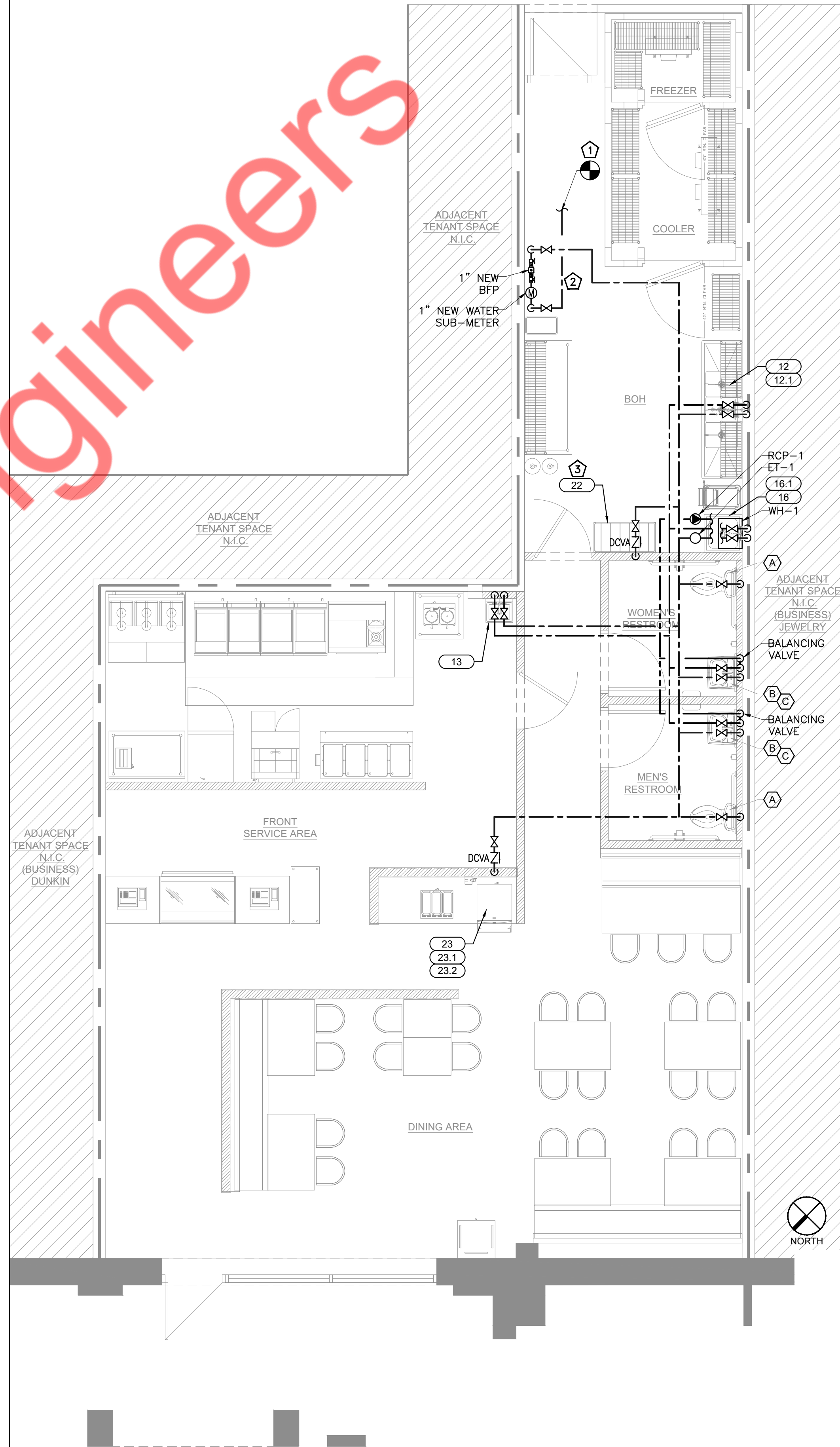
WATER SERVICE SIZE REQUIRED.



WATER SUPPLY RISER

SCALE
N.T.S.

2



WATER SUPPLY PLAN

SCALE
1/4" = 1'-0"

1

- GAS PLAN & RISER KEY NOTES**
1. CONNECT NEW 3" GAS LINE TO GAS METER. CONTRACTOR TO FIELD VERIFY CAPACITY, OUTLET PRESSURE AND LOCATION OF EXISTING GAS METER WITH OWNER/LANDLORD AND UPGRADE AS REQUIRED.
 2. CONTRACTOR TO FIELD VERIFY EXISTING AVAILABLE PRESSURE AT OUTLET OF EXISTING GAS METER AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE TO GAS FIRED EQUIPMENTS & MECHANICAL UNITS. PROVIDE PRESSURE REGULATOR WITH ASSOCIATED ACCESSORIES & FITTINGS IF REQUIRED.
 3. THE CONTRACTOR MUST ENSURE THAT THE CURRENT GAS METER IS UPGRADED TO A MINIMUM CAPACITY OF 1400 MBH.

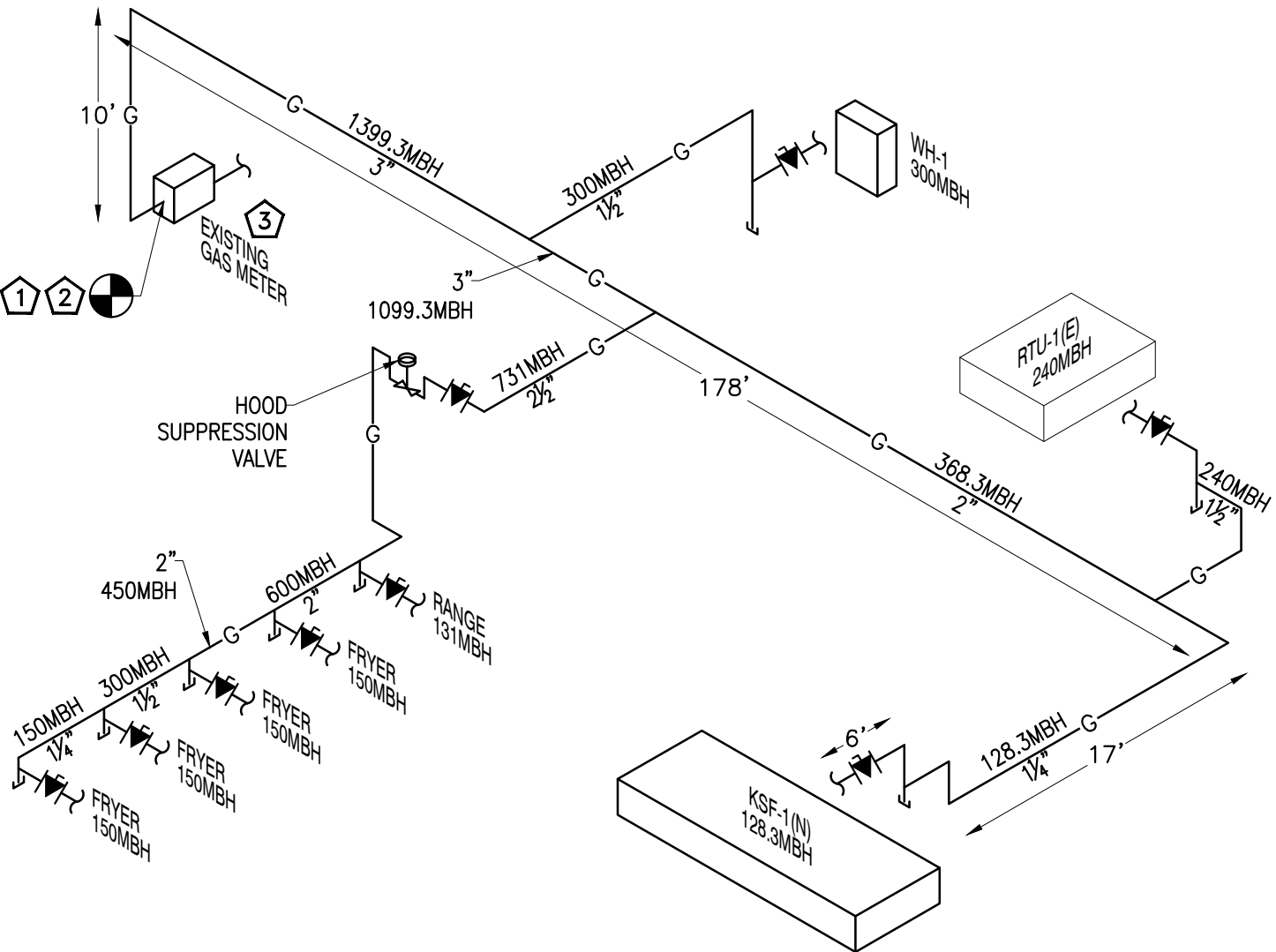
NATURAL GAS PIPING SYSTEM
PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE GAS EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE UNIONS, GAS PRESSURE REGULATOR, SHUT-OFF VALVES AND DIRT LEGS REQUIRED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

- NOTES:**
1. GAS PIPING TO BE SCHEDULE 40 STEEL PIPE W/125 CAST IRON SCREWED FITTINGS.
 2. GAS SYSTEM TO BE INSTALLED BY QUALIFIED LICENSED CONTRACTOR.
 3. VERIFY ALL EQUIPMENT BTU'S PRIOR TO INSTALLATION. ADJUST PIPE SIZE ACCORDING TABLE 402.4(2) OF 2021 INTERNATIONAL FUEL GAS CODE.

GAS PIPE SIZING PER
TABLE 402.4(2) OF 2021
INTERNATIONAL FUEL GAS CODE

EQUIVALENT LENGTH OF PIPE =
6+17+178+10 = 211
+ FITTINGS (+40%) = 293.4 FEET

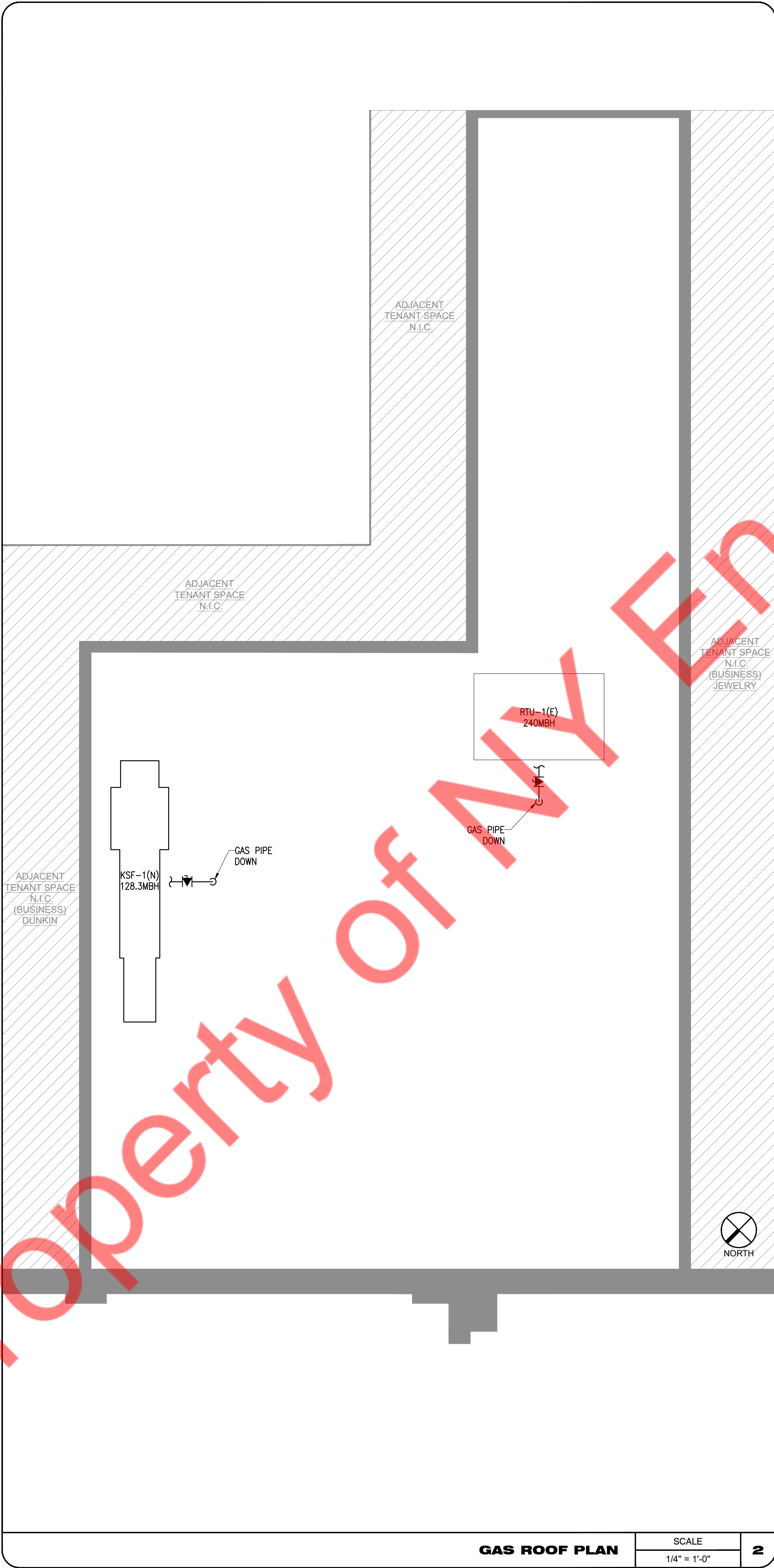
GAS SCHEDULE						
ITEM NO.	QTY.	DESCRIPTION	MANUFACTURER	MODEL	SIZE	BTU/HR.
WH-1	1	WATER HEATER	NORITZ	NCC300DV	1½"	300,000
RTU-1(E)	1	ROOF TOP UNIT	REFER MECHANICAL PLANS	REFER MECHANICAL PLANS	1½"	240,000
KSF-1(N)	1	KITCHEN SUPPLY FAN	REFER MECHANICAL PLANS	REFER MECHANICAL PLANS	1¼"	128,300
2	4	FRYER	GLOBE	GFF80G	1¼"	600,000
3	1	RANGE	FALCON	AR36-24R	1¼"	131,000
TOTAL LOAD						1,399,300



GAS RISER

SCALE
N.T.S.

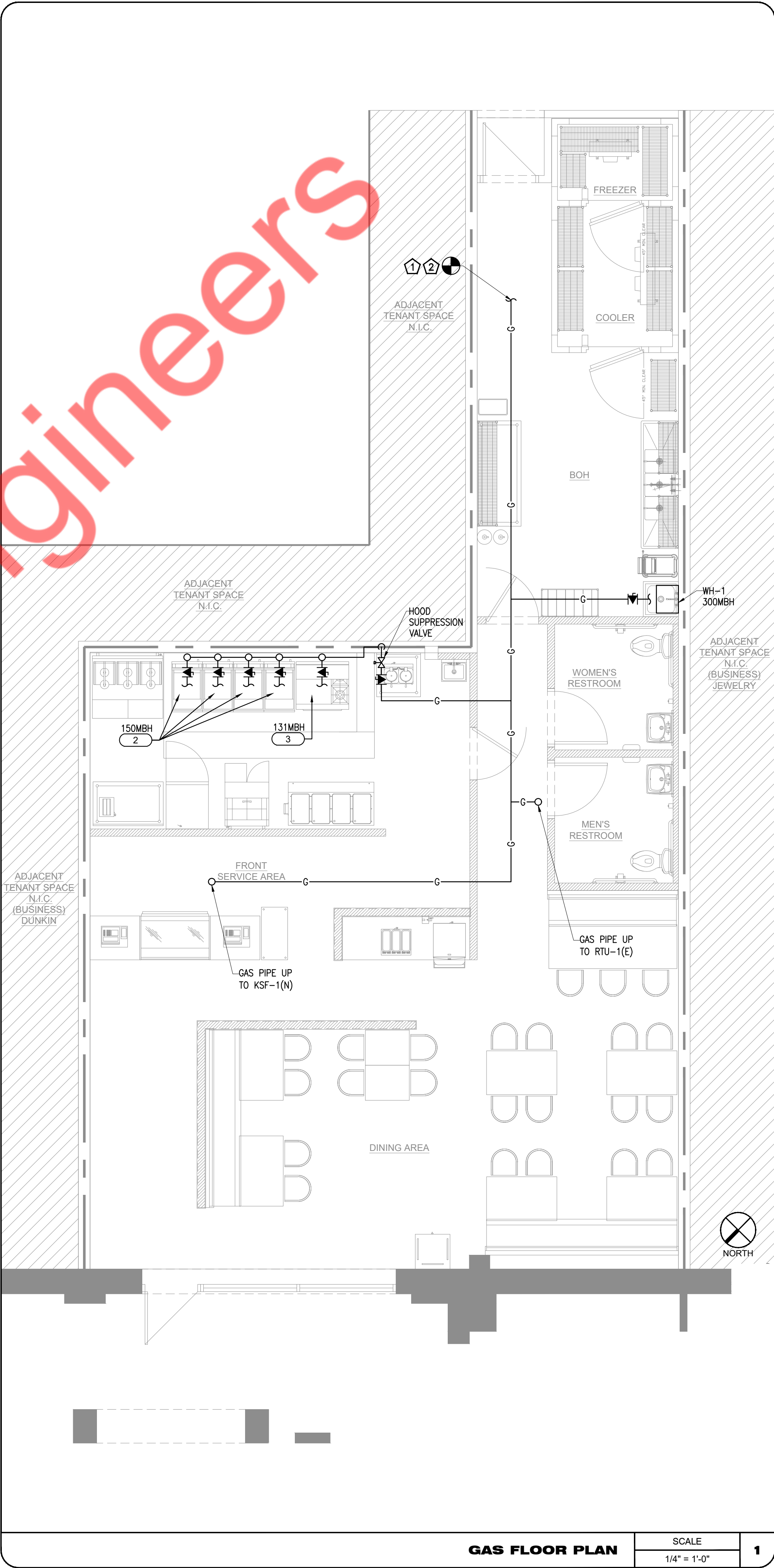
3



GAS ROOF PLAN

SCALE
1/4" = 1'-0"

2



GAS FLOOR PLAN

SCALE
1/4" = 1'-0"

1