SCOPE OF WORK

REUSE EXISTING #2 5 TON AND #1 3 TON SPLIT AIR HANDLING UNITS. PROVIDE ALL DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM.

PROVIDE TWO NEW EXHAUST FANS, ONE OUTSIDE AIR FAN, ONE HUMIDIFIER AND ONE DEHUMIDIFIER.

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

MECHANICAL PLAN NOTES

A. REUSE EXISTING #2 5 TON AND #1 3 TON SPLIT AIR HANDLING UNITS. PROVIDE NEW DUCTWORK WITH REQUIRED ACCESSORIES. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AND RETURN AIR DUCT CONNECTIONS. INSTALL FIRE DAMPERS IN ANY FIRE WALLS AND BETWEEN FLOORS. TRANSITION TO DUCT SIZES SHOWN. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO SCHEDULE FOR ADDITIONAL REQUIREMENTS.

B. ALL DUCTS SHALL BE MINIMUM 26 GAUGE SHEET METAL WITH EXTERNAL DUCT WRAP INSULATION FOR CONCEALED DUCTS AND ALL EXPOSED DUCTS WITH INTERNAL INSULATION. ALL DUCTS TO BE MANUFACTURED AND INSTALLED ACCORDING TO ASHRAE AND SMACNA METAL DUCT CONSTRUCTION STANDARD, LATEST EDITION. ALL MATERIALS WILL CONFORM TO NFPA 90A.

C. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE TYPE. MOUNT THERMOSTAT 48" A.F.F. IF EXISTING THERMOSTAT AND REMOTE SENSOR ARE NOT REUSABLE THEN PROVIDE NEW THERMOSTAT WITH LOCKABLE COVER. COORDINATE LOCATION OF THERMOSTAT. PROVIDE REMOTE SENSOR LOCATED 72" ABOVE FINISHED FLOOR NEAR LOCATION INDICATED. SEAL WALL OPENINGS WITH CAULK. COORDINATE LOCATION ON SITE WITH GENERAL CONTRACTOR AND EQUIPMENT.

D. ALL INTERIOR AIR DUCTS WITH INSULATION SHALL HAVE A MINIMUM OF THICKNESS OF 1.5", R-4.2 INSULATION. OUTSIDE AIR DUCTS TO HAVE R-6 INSULATION ACCORDING TO 2023 FBC - ENERGY CONSERVATION, 8TH EDITION.

E. 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.

F. ALL CONDENSATE DRAINS WILL BE COPPER FULL DIAMETER OF OUTLET AND WILL TERMINATE IN THE NEAREST DRAIN OR INDIRECT WASTE.

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

H. TESTING AND BALANCING SHALL BE DONE IN ACCORDANCE WITH 2023 FBC - ENERGY CONSERVATION, 8TH EDITION, SECTION C408.2.2. BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (N.E.B.B.), THE ASSOCIATED AIR BALANCE COUNCIL (A.A.B.C) NATIONAL STANDARDS OR EQUIVALENT PROCEDURES.

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

FLORIDA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF FBC 2023 AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

1. THE CONTRACTOR SHALL ENGAGE THE THE SERVICES OF A PROFESSIONAL ENGINEER TO PROVIDE THE REQUIRED SPECIAL INSPECTIONS AND TESTS.
2. 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.
3. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2023 FBC - MECHANICAL, 8TH EDITION:
   A. REFRIGERATION SYSTEMS - MC 1108
4. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. DUCT CONSTRUCTION AND INSTALLATION- 2023 FBC - MECHANICAL, 8TH EDITION - SECTION 603
   B. AIR INTAKES, EXHAUSTS AND RELIEF - 2023 FBC - MECHANICAL, 8TH EDITION SECTION 401.5
5. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
6. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2023 FBC - MECHANICAL, 8TH EDITION SECTION 401.
7. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2023 FBC - MECHANICAL, 8TH EDITION SECTION 403.3.
8. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
9. 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.
10. A WRITTEN REPORT DESCRIBING THE ACTIVITIES AND MEASUREMENTS COMPLETED IN ACCORDANCE WITH SECTION 2023 FBC - ENERGY CONSERVATION ,8TH EDITION C408.2.2.
11. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
12. SMOKE DETECTOR SHALL MEET UL268A.

GENERAL NOTES

A. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET. PAY SPECIAL ATTENTION TO THE RESPONSIBILITY SCHEDULE. WORK DESIGNATED ON SCHEDULE SHALL BE CONSIDERED INCLUDED IN YOUR SCOPE OF WORK AND CONTRACT AMOUNT.

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

C. DRAWINGS/DETAILS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, AND CHECK/COORDINATE DRAWINGS OF ALL TRADES.

D. COORDINATE WITH THE WORK OF OTHERS SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE DUCT RISES AND DRIPS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.

E. DRAWINGS FOR HVAC WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

F. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.

G. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.

H. VERIFY LOCATION OF PERMISSIBLE NEW STRUCTURAL ROOF PENETRATIONS AND ADAPT THE REQUIRED DUCTS ACCORDINGLY. THE OPENINGS MUST BE LOCATED USING A REBAR LOCATOR, TRYING TO LEAVE A TRANSVERSE BAR WITHIN 4" FROM THE OPENING. LOCATE OPENINGS AT MID-DISTANCE BETWEEN THE STEMS OF THE DOUBLE TEE AND LONGITUDINAL REINFORCEMENT SHALL NEVER BE CUT. CALL THE ARCHITECT'S OFFICE IN CASE OF UNEXPECTED DIFFICULTIES.

I. ALL A/C 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. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.

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

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

MECHANICAL SYMBOLS

- EXHAUST FAN
- SUPPLY OR OUTSIDE AIR DUCT
- RETURN OR EXHAUST AIR DUCT
- INSULATED RIGID DUCTWORK
- DUCT TRANSITION
- MANUAL VOLUME DAMPER
- FLEXIBLE DUCTWORK R-6.0
- ROOF MOUNTED EXHAUST FAN OUTLET
- AIR HANDLING UNIT
- CFM — CUBIC FEET/ MINUTE
- S/A — SUPPLY AIR
- R/A — RETURN AIR
- SG — SUPPLY GRILLE
- Ø — ROUND DUCT DIAMETER
- AD — ACCESS DOOR
- SMOKE ALARM ANNUNCIATOR
- BACK DRAFT DAMPER
- MOTORIZED DAMPER
- SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- RETURN DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- PERORATED TYPE SUPPLY DIFFUSER REFER TO DIFFUSER SCHEDULE FOR SPECIFICATIONS
- EXHAUST GRILLE
- OPPOSED BLADE DAMPER
- DUCT SMOKE DETECTOR
- PROGRAMMABLE THERMOSTAT
- TEMPERATURE SENSOR
- DUCT SMOKE DETECTOR
- CONDENSATE PIPING
- VOLUME CONTROL DAMPER

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

SPLIT SYSTEM SCHEDULE

AIR HANDLER DATA	UNIT TAG	AHU-1(E)	AHU-2(E)	AHU-3(E)
	UNIT TYPE	MULTIPOSITION	MULTIPOSITION	MULTIPOSITION
	AREA SERVED	SEE PLAN	SEE PLAN	SEE PLAN
	SUPPLY AIR (CFM)	2000	2000	1200
	OUTSIDE AIR (CFM)	500	0	100
	STATIC PRESS. (E.S.P.)	S.A.E.	S.A.E.	S.A.E.
	VOLTS/PH/HZ	S.A.E. & V.I.F.	S.A.E. & V.I.F.	S.A.E. & V.I.F.
	TOT. COOLING CAP. (MBH)	S.A.E.	S.A.E.	S.A.E.
	ELECTRIC HEAT CAPACITY (KW)	10 & V.I.F.	10 & V.I.F.	V.I.F.
	MANUFACTURER	S.A.E.	S.A.E.	S.A.E.
	MODEL NO.	S.A.E. & V.I.F.	S.A.E. & V.I.F.	S.A.E. & V.I.F.
	WEIGHT, LBS	S.A.E.	S.A.E.	S.A.E.
	MIN. CKT. AMPACITY	S.A.E. & V.I.F.	S.A.E. & V.I.F.	S.A.E. & V.I.F.
	MOCP	S.A.E. & V.I.F.	S.A.E. & V.I.F.	S.A.E. & V.I.F.
CONDENSING UNIT DATA	UNIT TAG	CU-1(E)	CU-2(E)	CU-3(E)
	AIR HANDLER SERVED	AHU-1(E)	AHU-2(E)	AHU-3(E)
	NOMINAL CAPACITY	5.0 TR	5.0 TR	3.0 TR
	REFRIGERANT	R410A	R410A	R410A
	V/Ph/Hz	208/3/60 & V.I.F.	208/3/60 & V.I.F.	208/1/60 & V.I.F.
	M.C.A. / M.C.B. AMPS	S.A.E. & V.I.F.	S.A.E. & V.I.F.	S.A.E. & V.I.F.
	MANUFACTURER	S.A.E.	S.A.E.	S.A.E.
	MODEL# (CONDENSER)	S.A.E.	S.A.E.	S.A.E.
	TOT. COOLING CAP. (MBH)	S.A.E.	S.A.E.	S.A.E.
	SEER2/HSPF2	S.A.E.	S.A.E.	S.A.E.
	WEIGHT, LBS	S.A.E.	S.A.E.	S.A.E.

NOTES :
SAE: SAME AS EXISTING
VIF: VERIFY IN FIELD
1. EXISTING CU & AHU WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
2. CONTRACTOR TO FIELD VERIFY IF CU & AHU IS WORKING AT THEIR 100% RATED CAPACITY. INFORM TO DESIGN ENGINEER IF ANY DISCREPANCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
3. IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING CU & AHU. CO-ORDINATE FINAL LOCATION OF T-SENSOR WITH ARCHITECT/OWNER.
4. CONTRACTOR TO BALANCE OUTSIDE AIR DAMPER ON EXISTING AHU TO MATCH VALUE MENTIONED IN AIR BALANCE TABLE.
5. REPLACE FILTERS, IF REQUIRED.

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

OCCUPANCY CALCULATION PER 2023 FLORIDA BUILDING CODE, MECHANICAL, 8TH EDITION

FLOWROOM	1865 SQ. FT.	@40 PEOPLE/1000SQ.FT.	75 PEOPLE
LOBBY	450 SQ. FT.	@10 PEOPLE/1000SQ.FT.	6 PEOPLE
OFFICE	345 SQ. FT.	@5 PEOPLE/1000SQ.FT.	2 PEOPLE
		TOTAL	93 PEOPLE

VENTILATION REQUIREMENTS PER 2023 FLORIDA BUILDING CODE, MECHANICAL, 8TH EDITION

OUTSIDE AIR CALCULATIONS			
FLOWROOM	1865SQ. FT. X	0.06 CFM/SQ. FT. =	112 CFM
	75 PEOPLE. X	20 CFM/PEOPLE. =	1500 CFM
LOBBY	450 SQ. FT. X	0.06 CFM/SQ. FT. =	27 CFM
	6 PEOPLE. X	5 CFM/PEOPLE =	30 CFM
OFFICE	345 SQ. FT. X	0.06 CFM/SQ. FT. =	21 CFM
	2 PEOPLE. X	5 CFM/PEOPLE =	10 CFM
HALLWAY	400 SQ. FT. X	0.06 CFM/SQ. FT. =	24 CFM
LAUNDRY	300 SQ. FT. X	0.12 CFM/SQ. FT. =	36 CFM
BREATHING ZONE OUTDOOR AIRFLOW			1760 CFM
EFFECTIVENESS			0.8
ZONE OUTDOOR AIRFLOW			2200 CFM
OUTSIDE AIR PROVIDED			3300 CFM
EXHAUST AIR CALCULATIONS			
SHOWER	150 CFM PER FIXTURE	X NO. OF FIXTURE(#5) =	750 CFM
RESTROOMS	70 CFM PER FIXTURE	X NO. OF FIXTURE(#3) =	210 CFM
EXHAUST AIR REQUIRED			960 CFM

AIR BALANCE

UNIT	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR
AHU-1(E)	2000	500	1500	0 CFM
AHU-2(E)	2000	0	2000	0 CFM
AHU-3(E)	1200	100	1100	0 CFM
EF-1(N)	-	-	-	2000 CFM
EF-2(N)	-	-	-	960 CFM
OAF-1(N)	2700	2700	-	0 CFM
TOTAL :	7900 CFM	3300 CFM	4600 CFM	2960 CFM
	BUILDING PRESSURE :		+ 340 CFM	POSITIVE

HUMIDIFIER SCHEDULE

UNIT #	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	TYPE	INPUT BTU/HR	OUTPUT (LBS/HR)	WATER USAGE (GAL/HR)	ELECTRICAL	FLA	DIMENSIONS LXWXH (IN.)	MAX. WEIGHT (LBS)
HU-1(N)	DRISTEEM	GTS LX-100	NATURAL GAS	122,000	100	12	120V/1P/60Hz	2.0	24X24X44	350

NOTES:
1. DRISTEEM OR EQUAL.
2. VERIFY ALL ELECTRICAL , GAS & PLUMBING REQUIREMENTS WITH MANUFACTURERS SPEC PRIOR TO INSTALLATION.
3. GAS, WATER & DRAIN CONNECTIONS BY PLUMBER. SEE PLUMBING SHEETS.
4. PROVIDE DUCT DISPERSION OPTION.
5. WALL/FLOOR MOUNTED. CONFIRM FINAL REQUIREMENT WITH ARCHITECT/OWNER.

DEHUMIDIFIER SCHEDULE

UNIT #	LOCATION	AIRFLOW CFM	E.S.P. WG	ELECTRICAL DATA V/P/HZ/POWER	CAP. (PINTS/DAY)	UNIT WEIGHT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL
DU-1(N)	FLOWROOM	585	0.2	220/1/60/2250W	190	176 LBS	EBAC	PD200

NOTES:
1. DEHUMIDIFIER CONTROLS PROVIDED WITH UNIT.
2. CONTRACTOR MUST PROVIDE SECONDARY DRAIN PAN.
3. DEHUMIDISTAT TO BE LOCATED IN THE SPACE OR IN THE RETURN GRILLE CLOSE TO THE RETURN AIR OPENING.
4. DEHUMIDIFIER TO BE INSTALLED IN VERTICAL(WALL MOUNTED)/HORIZONTAL (CEILING MOUNTED) AS PER SITE CONDITIONS.

ELECTRIC DUCT HEATER SCHEDULE

SYMBOL	QTY	MANUFACTURER	USE	HEATER TYPE	DIMENSIONS (WXH)	HEATING CAPACITY	ELECTRICAL DATA AMPS	ELECTRICAL DATA VOLTAGE
DH-1(N)	1	GREENHECK	SUPPLY	SLIP-IN	32"X12"	30 KW	83.37	208/3/60

NOTES:
1. INSTALL ELECTRIC DUCT HEATER AS PER MANUFACTURER'S RECOMMENDATION.
2. DIMENSIONS SAME AS SUPPLY DUCT SIZE.
3. SCR CONTROL WITH DUCT STAT.
4. INTERLOCK WITH OAF-1(N).
5. PROVIDE 12" METAL DUCT LINER BEFORE AND AFTER HEATER.

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	B	C	R	R1	EG	EG1
USE	SUPPLY	SUPPLY	SUPPLY	RETURN	RETURN	EXHAUST	EXHAUST
MODEL	TMSA	TMSA	300FS	350FL	350FL	355FL	50F
MOUNTING	SAT CEILING	SAT CEILING	WALL MOUNTED	SAT CEILING	WALL MOUNTED	WALL MOUNTED	SAT CEILING
LOCATION	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
CFM	0-200 | 200-400	0-100	0-400	0-400 | 1000-2000	0-200	0-1000	0-200
FACE SIZE	24" X 24"	12" X 12"	14" X 10"	24"X24"	10"X6"	24"X14"	12"X12"
NECK SIZE	REFER TABLE A	REFER TABLE A	REFER TABLE A	REFER TABLE A	REFER TABLE A	REFER TABLE A	REFER TABLE A
FRAME TYPE	LAYIN	LAYIN	-	LAY IN	-	-	LAY IN
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
NOISE CRITERIA	<30	<30	<30	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

NOTES:
1. ALL DIFFUSERS : CONTRACTOR SHALL COORDINATE WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS PLANS TO ENSURE PROPER AIR DEVICE BORDER SELECTION.
2. REFER ARCHITECTURAL DRAWINGS FOR CEILING TYPE.
3. COORDINATE COLOR/FINISH WITH ARCHITECT.

FAN SCHEDULE

DESIGNATION	EF-1(N)	EF-2(N)	OAF-1(N)
STATUS	NEW	NEW	NEW
QUANTITY	1	1	1
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK
MODEL	G-140-VG	G-120-VG	SQ-15-M2-VG
CFM & ESP	2000@ 0.5 IN. WC ESP	960@ 0.5 IN. WC ESP	2700@ 1.0" IN. WC ESP
HP	0.75	0.25	2
FLA(AMPS)	10	3.8	12.5
MCA (A)	12.5	4.8	15.6
WEIGHT (LBS)	59	48	150
VOLT/PH/HZ	115/1/60	115/1/60	208/1/60
REMARKS	1	2	1

NOTES :
1. FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS OA MODE. SEE CONTROL SEQUENCE ON SHEET M-2.
2. FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

TABLE -A

FOR ROUND NECK		FOR SQUARE NECK	
NECK SIZE	CFM RANGE	NECK SIZE	CFM RANGE
Ø6"	0-100	6"X6"	0-115
Ø8"	101-200	8"X8"	116-220
Ø10"	201-400	10"X10"	221-350
Ø12"	401-600	12"X12"	351-520
		14"X14"	521-730
		16"X16"	731-840
		18"X18"	840-1035
		20"X20"	1036-1285
		22"X22"	1286-1570

SEQUENCE OF OPERATION

CONTROL SEQUENCE FOR EQUIPMENT SERVICING THE EXERCISE STUDIO:

OCCUPIED MODE (HOT YOGA).

A. IN THE OCCUPIED MODE, OAF-1(N) OUTSIDE AIR MOTORIZED VOLUME DAMPER SHALL OPEN FULLY AND AHU-2(E) SUPPLY AIR MOTORIZED VOLUME DAMPER SHALL CLOSE FULLY. OAF-1(N) SHALL RUN CONTINUOUSLY AT FULL SPEED DELIVERING 2700 CFM. OAF-1(N) PROVIDING OA 2700 CFM MAINTAINING A CONSTANT MINIMUM HEATED DISCHARGE AIR TEMPERATURE VIA DUCT HEATER SCR CONTROLLER, USER INPUT ADJUSTABLE WITH DEFAULT SETPOINT OF 92°F.
B. EF-1(N) EXHAUST FAN TO RUN CONTINUOUS DURING OCCUPIED MODE.
C. HU-1(N). HUMIDIFICATION UNIT SHALL ENGAGE AND MAINTAIN USER ADJUSTABLE DESIRED SPACE RELATIVE HUMIDITY, DEFAULT SET TO 50% RH.
D. DU-1(N). DE-ENERGIZED
E. DH-1(N). ENERGIZED

UNOCCUPIED MODE (DRY TIME).

A. AHU-2(E). IN THE UNOCCUPIED MODE, THE SUPPLY AIR MOTORIZED VOLUME DAMPER SHALL OPEN FULLY, AND OAF-1(N) OUTSIDE AIR MOTORIZED VOLUME DAMPER SHALL OPEN PARTIALLY AND PROVIDE 300 CFM TO AHU-2(E). AHU-1(E) SHALL MAINTAIN SPACE COOLING TEMPERATURE SETPOINT FROM USER INPUT ADJUSTABLE THERMOSTAT WITH DEFAULT UNOCCUPIED SETPOINT OF 77°F.
B. EF-1(N). DE-ENERGIZED
C. HU-1(N). DE-ENERGIZED.
D. DU-1(N). DEHUMIDIFICATION UNIT SHALL ENGAGE AND MAINTAIN USER ADJUSTABLE DESIRED SPACE RELATIVE HUMIDITY, DEFAULT SET TO 40% RH.
E. DH-1(N). DE-ENERGIZED

SEQUENCE OF OPERATION TABLE

UNIT TAG	OCCUPIED MODE (HOT YOGA)	UNOCCUPIED MODE (NORMAL OPERATION)
AHU-2(E)	OFF	COOLING/HEATING
OAF-1(N)	ON (2700 CFM)	ON (1000 CFM)
EF-1(N)	ON	OFF
HU-1(N)	ON	OFF
DU-1(N)	OFF	ON
DH-1(N)	ON	OFF

HVAC GENERAL NOTES

A. CONTRACTOR SHALL BALANCE EACH DEVICE WITH THE CFM SHOWN ON PLAN.

B. NEW DUCTWORK SHOWN ON PLAN ARE SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR PIPING AND DUCTWORK ROUTING. OFFEST AND RUN PIPING, DUCTWORK INSIDE THE STRUCTURE IF REQUIRED. PROVIDE ANY EXTRA PIPING, DUCTWORK, FITTINGS, INSULATIONS AND OTHER ACCESSORIES IN ORDER TO COMPLETE THE INSTALLATION.

C. COORDINATE LOCATIONS AND SIZES OF INTAKE & EXHAUST OPENINGS WITH OWNER AND RESPECTIVE ENGINEER.

D. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.

E. DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.

F. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.

G. CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.

H. COORDINATE WITH ALL TRADES FOR MATERIALS IN RATED AND PLENUM SPACES.

I. ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.

J. MOUNT DUCTWORK AS HIGH AS POSSIBLE.

K. TEST AND BALANCE AIR SYSTEMS. PROVIDE REPORT TO G.C AND OWNER.

L. ALL EXPOSED ROUND DUCTWORK SHALL BE INTERNALLY LINED. ALL DUCTWORK DIMENSIONS ARE INSIDE CLEAR.

M. NEW DUCTWORK IN CONCEALED AREAS MAY BE RECTANGULAR WITH EQUIVALENT CROSS SECTIONAL FLOW AREA.

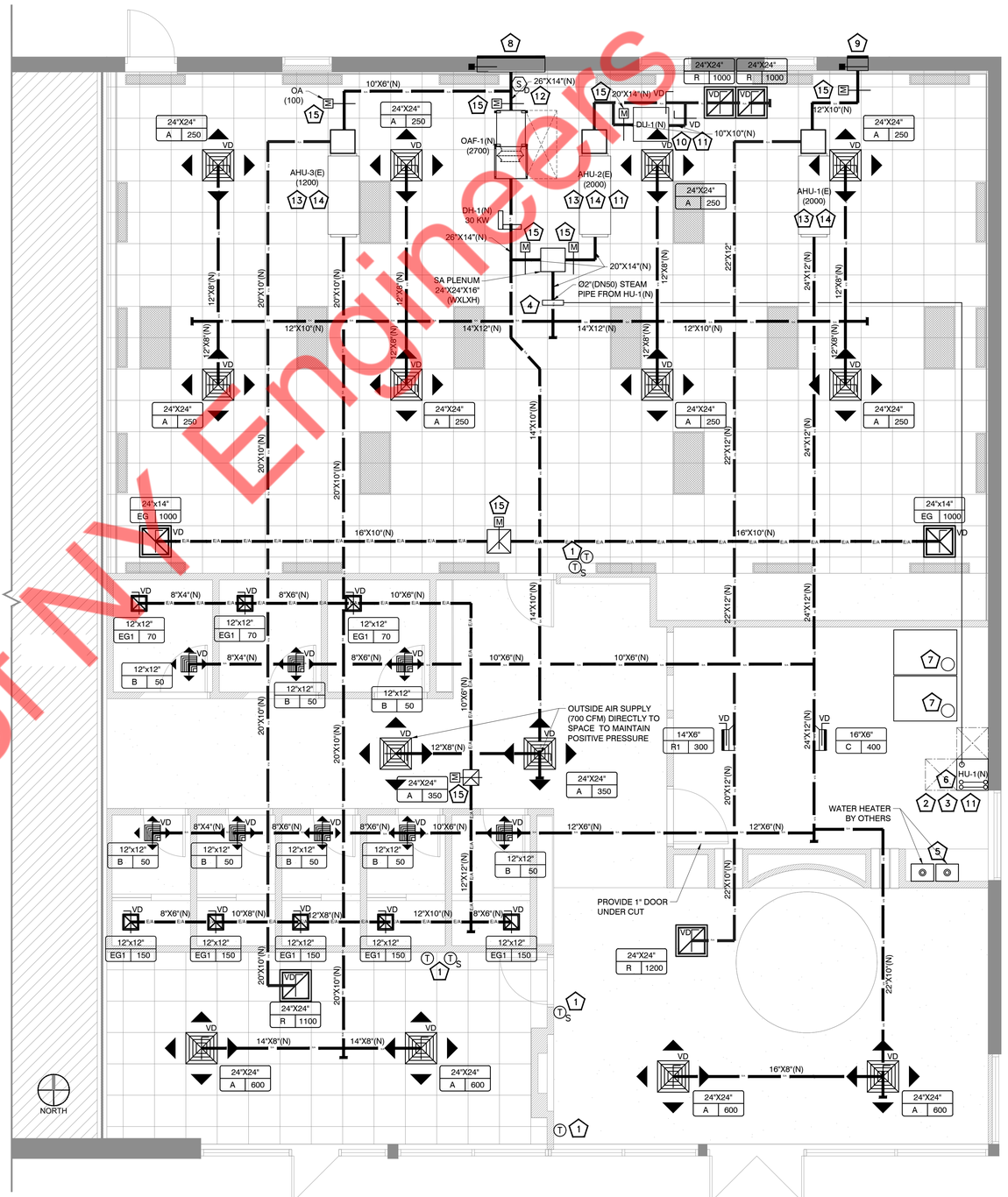
N. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FIRE RATINGS OF THE WALLS.

O. ARCHITECTURAL LAYOUT AND DIMENSIONS FOR EQUIPMENT TO TAKE PRECEDENCE OVER MEP.

P. PROVIDE CORD OPERATED DAMPER IN INACCESSIBLE CEILING.

HVAC KEY NOTES (#)

1. CONTRACTOR TO RELOCATE AND REUSE EXISTING T-STAT AND REMOTE SENSOR. CONFIRM FINAL LOCATION/ REQUIREMENT OF ALL TEMPERATURE SENSORS/T-STATS WITH ARCHITECT/ OWNER.
2. PROVIDE NEW GAS FIRED HUMIDIFIER. COORDINATE GAS, WATER SUPPLY & DRAIN REQUIREMENT WITH PLUMBING CONTRACTOR.
3. CO-ORDINATE FINAL LOCATION & MOUNTING POSITION (WALL MOUNT/FLOOR MOUNT) OF HU-1(N) WITH CLIENT/ARCHITECTURE.
4. DUCT DISPERSION ASSEMBLY TO BE INSTALLED WITH HU-1(N) AS PER MANUFACTURER INSTRUCTIONS. COORDINATE DRAIN REQUIREMENT WITH PLUMBING CONTRACTOR.
5. Ø3"/5" CONCENTRIC VENT FOR WATER HEATER UP THROUGH ROOF. CONTRACTOR TO FIELD VERIFY & INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
6. Ø3" FLUE VENT & COMBUSTION AIR INTAKE FOR HU-1(N) UP THROUGH ROOF. CONTRACTOR TO FIELD VERIFY & INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
7. Ø10" DRYER EXHAUST VENT UP THROUGH ROOF. CONTRACTOR TO FIELD VERIFY THE TERMINATION POINT. TERMINATE 3FT AWAY FROM ANY BUILDING OPENINGS & 10FT AWAY FROM MECHANICAL AIR INTAKES. TERMINATE WITH BACK-DRAFT DAMPER & WEATHER HOOD AS PER MANUFACTURER'S INSTRUCTIONS.
8. 52"X18" (2800 CFM) OUTSIDE AIR INTAKE LOUVER. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF OAI LOUVER. MAINTAIN MIN. 10FT DISTANCE FROM ANY EXHAUST OUTLET.
9. 16"X12" (500 CFM) OUTSIDE AIR INTAKE LOUVER. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF OAI LOUVER. MAINTAIN MIN. 10FT DISTANCE FROM ANY EXHAUST OUTLET.
10. PROVIDE NEW DEHUMIDIFIER. INTERLOCK OPERATION OF DU-1(N) WITH AHU-2(E). COORDINATE DRAIN REQUIREMENT WITH PLUMBING.
11. REFER CONTROL SEQUENCE ON SHEET M-2 FOR DESIRED OPERATION OF EQUIPMENT IN EXERCISE ROOM.
12. PROVIDE SMOKE DETECTOR IN SUPPLY DUCT OF OAF-1(N). SMOKE DETECTOR SHALL BE FURNISHED/INSTALLED BY MECHANICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR TO SHUT DOWN CORRESPONDING RTU UNDER ALARM CONDITIONS. ALL WIRING SHALL BE IN CONDUIT PER N E C.
13. EXISTING AIR HANDLING UNIT TO REMAIN ALONG WITH ALL ACCESSORIES. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION ON SITE. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/ REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. NOTIFY ARCHITECT/ ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
14. CD TO NEAREST PLUMBING DRAIN W/ AIR GAP FITTING. COORDINATE W/PLUMBING CONTRACTOR. PROVIDE HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL.
15. MD TO INTERLOCK WITH RESPECTIVE UNIT.



HVAC FLOOR PLAN

SCALE 1/4" = 1'-0"

HVAC GENERAL NOTES

A. COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND STRUCTURAL ENGINEERS.

B. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.

C. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.

D. ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.

E. TEST AND BALANCE AIR SYSTEMS. PROVIDE REPORT TO GENERAL CONTRACTOR AND OWNER.

F. ALL RTU WEIGHTS ARE INCLUDING ROOF CURBS AND/OR ADAPTERS.

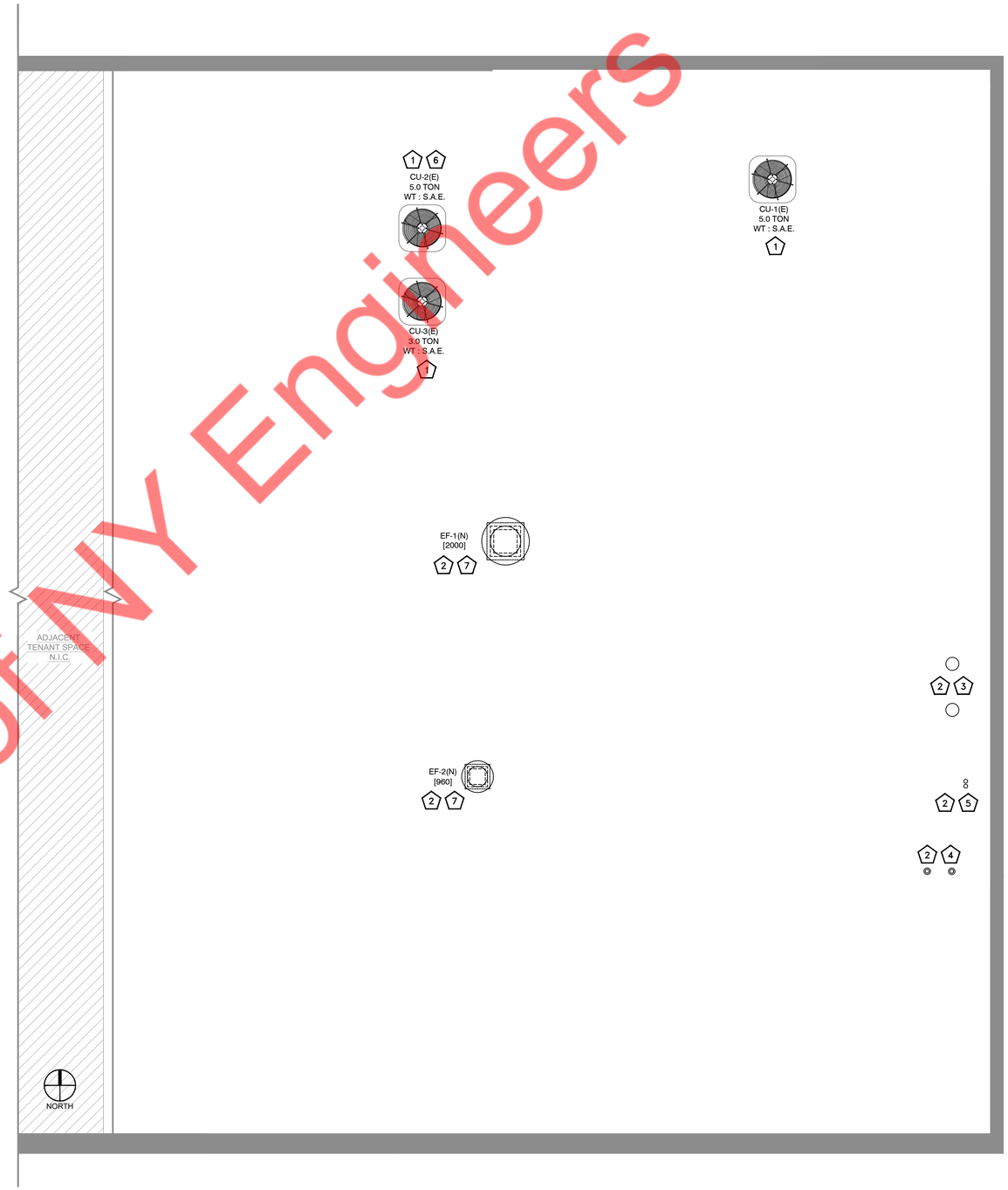
G. EXISTING ROOF CURBS TO BE REUSED WHEREVER POSSIBLE. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING CURBS, REPLACE EXISTING CURBS IF NOT IN A GOOD CONDITION.

H. PATCH THE EXTRA PENETRATIONS AS & IF REQUIRED OR CUT AN EXTRA PORTION OF THE ROOF IF EXISTING PENETRATION IS NOT FEASIBLE/WORKABLE. COORDINATE WITH ROOFING AND MECHANICAL CONTRACTOR.

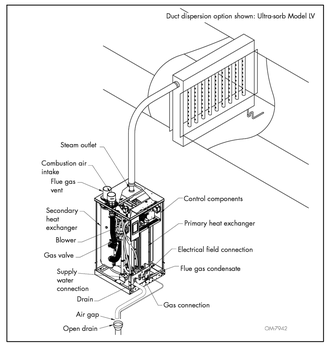
I. MATERIAL FROM EXISTING SYSTEM WHICH IS RENDERED USELESS SHALL BE REMOVED AND DISPOSED OF OFF SITE.

HVAC KEY NOTES (#)

1. EXISTING CONDENSING UNIT TO REMAIN & TO BE REUSED. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. VERIFY IN FIELD PRIOR TO BID. VERIFY FINAL LOCATION & CONFIGURATION ON FILED. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
2. EXHAUST SHALL TERMINATE 3 FEET FROM THE PROPERTY/ LOT LINE, 3 FEET FROM THE OPERABLE OPENING INTO THE BUILDING AND 10 FEET FROM THE MECHANICAL OUTSIDE AIR INTAKE OPENINGS.
3. Ø10" DRYER DUCT FROM FIRST FLOOR. TERMINATE AS PER MANUFACTURE'S RECOMMENDATIONS. PROVIDE MANUFACTURER RECOMMENDED VENTING KIT.
4. Ø3"/5" CONCENTRIC VENT FROM FIRST FLOOR. TERMINATE AS PER MANUFACTURER RECOMMENDATION. PROVIDE MANUFACTURER RECOMMENDED VENTING KIT.
5. Ø3" FLUE VENT & COMBUSTION AIR INTAKE FROM FIRST FLOOR. TERMINATE AS PER MANUFACTURER RECOMMENDATION. PROVIDE MANUFACTURER RECOMMENDED VENTING KIT.
6. REFER CONTROL SEQUENCE ON SHEET M-2 FOR DESIRED OPERATION OF EQUIPMENT IN EXERCISE ROOM.
7. CONTRACTOR TO INSTALL EXHAUST FAN AS PER MANUFACTURER RECOMMENDATION. PROVIDE ROOF CURB.



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

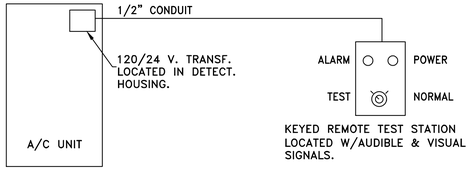


HUMIDIFIER INSTALLATION DETAIL

NOT TO SCALE

DUCT SMOKE DETECTORS REMOTE TEST SWITCH WILL BE PROVIDED WITH AN AUDIO/VISUAL LED INDICATOR, LOCATED IN A NORMALLY OCCUPIED AREA 48" AFF. NFPA 90A 6-4.4.3(1), & (2) 2015 EDITION.

THE ACTIVATION OF THE DUCT DETECTOR, SHALL SHUT A/C UNITS DOWN IMMEDIATELY, WITHOUT DELAY.

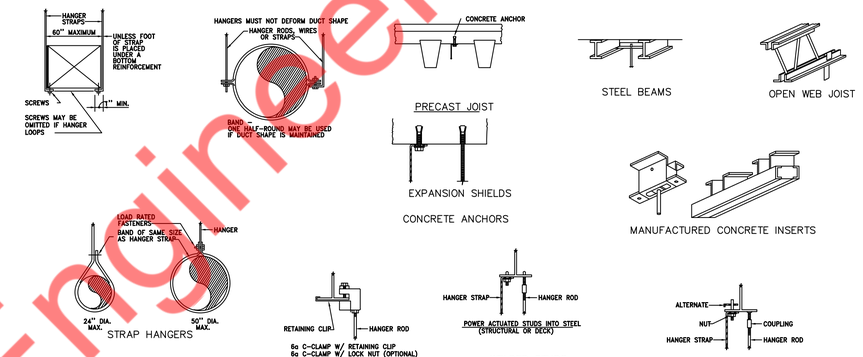


ELECTRICAL CONTRACT. SHALL COORDINATE A/C SHUT DOWN WITH MECH. CONTRACT. COORDINATE EXACT LOCATION OF TEST AND RETEST SWITCHES, AND HORN WITH OWNER.

DUCT SMOKE DETECTOR SHALL BE CONNECTED TO BUILDING FIRE ALARM SYSTEM TO ACTIVATE BUILDING FIRE ALARM IF ONE IS PRESENT.

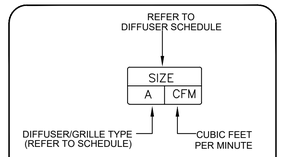
DUCT DETECTOR DETAIL

NOT TO SCALE



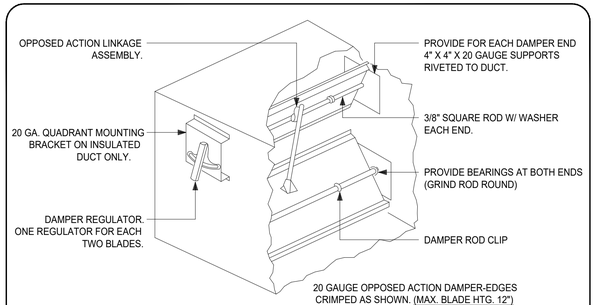
UPPER & LOWER ATTACHMENTS & DEVICES

NOT TO SCALE



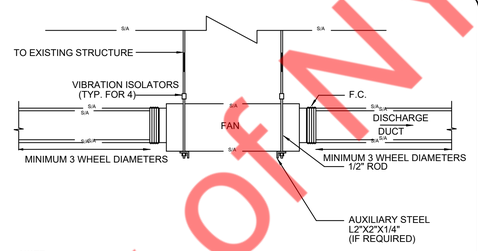
DIFFUSER/GRILLE TAG

NOT TO SCALE



VOLUME DAMPER DETAIL

NOT TO SCALE

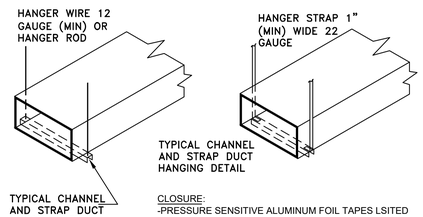


NOTE:
1. DUCT LENGTH TO BE MINIMUM THREE WHEEL DIAMETER ON DISCHARGE AND INLET.

INLINE FAN DETAILS

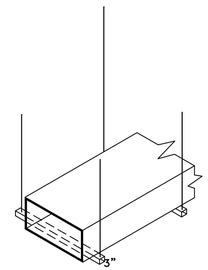
NOT TO SCALE

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



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

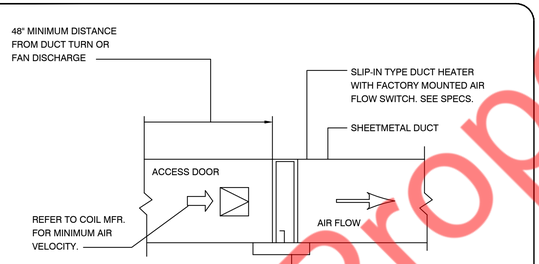
CLOSURE:
-PRESSURE SENSITIVE ALUMINUM FOIL TAPES LSITED UNDER UL 181A, PART I (P)
- HEAT ACTIVATED ALUMINUM FOIL/SCRIM TAPES LISTED UNDER UL 181A, PART II (H)
- MASTIC AND GLASS FABRIC TAPE CLOSURE SYSTEMS LISTED UNDER UL 181A, PART III (M)



HANGER SPACING AND EXTENSION 3" WIDE CHANNELS

DUCT SUPPORTS

NOT TO SCALE

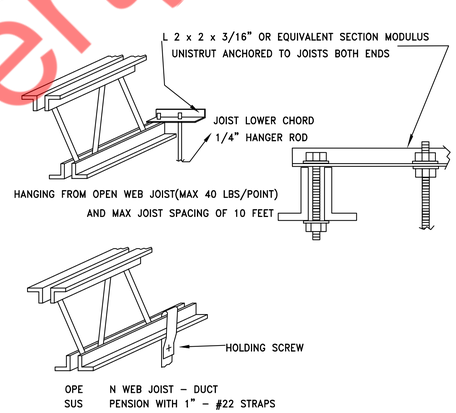


NOTE:

1. REFER TO MFR'S INSTALLATION INSTRUCTION ON HOW TO INSTALL DUCT HEATERS.
2. PROVID ACCESS DOOR IN DUCT FOR ELEMENT REPLACMENT WHEN INSTALLTION DOES NOT PERMIT SLIP-OUT OF DUCT HEATER.

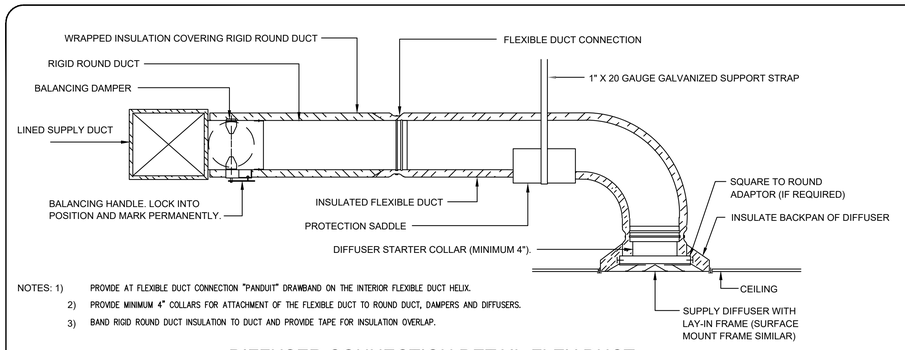
DUCT HEATER DETAIL

NOT TO SCALE



DUCT MOUNTING DETAIL

NOT TO SCALE



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

DIFFUSER CONNECTION DETAIL-FLEX DUCT

NOT TO SCALE

SCOPE OF WORK

1. REUSE EXISTING #3, 120/208V, 3 PH, 4-W ELECTRICAL SERVICES FOR THE PROJECT SPACE.
2. REUSE EXISTING #3, 200A, 120/208V, 3 PH, 4-W ELECTRICAL METERS & DISCONNECT SWITCHES FOR THE PROJECT SPACE.
3. REUSE EXISTING WIREWAY FOR THE PROJECT SPACE.
4. PROVIDE NEW 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" FOR THE PROJECT SPACE.
5. PROVIDE NEW 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" FOR THE PROJECT SPACE.
6. PROVIDE NEW 200A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C" FOR THE PROJECT SPACE.
7. PROVIDE 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 FLORIDA ELECTRIC CODE AND ALL CODES AND ORDINANCES OF THE AUTHORITY HAVING JURISDICTION.
6. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION FOR ALL EQUIPMENT. CONFIRM WITH OWNER'S REPRESENTATIVE.
7. ALL ELECTRICAL NOT BEING REUSED MUST BE REMOVED IN ITS ENTIRETY.
8. ALL CONDUIT IN OR UNDERGROUND OR IN CONCRETE MUST BE RIGID GALVANIZED STEEL.
9. CIRCUIT BREAKERS AND PANELS TO BE BOLT ON TYPE.
10. ALL EQUIPMENT SHALL BE APPROVED BY UL OR OTHER NATIONALLY RECOGNIZED TESTING COMPANY.
11. ALL RECEPTACLES SHALL BE GROUNDED AS REQUIRED BY NEC 250.146
12. SUBMIT SERVICE ENTRANCE EQUIPMENT FOR SEPARATE APPROVAL.
13. ALL LOW VOLTAGE MUST BE IN CONDUIT TO ABOVE THE DROP CEILING. BRIDAL RINGS OR "J" HOOKS REQUIRED.
14. SEPARATE PERMITS ARE REQUIRED FOR ALL LOW VOLTAGE SUCH AS TELEPHONE, DATA, THERMOSTAT, MUSIC, ALARMS ETC.
15. SEPARATE PERMIT REQUIRED FOR SIGNAGE.
16. PRIOR TO ANY CONSTRUCTION WORK BEGINNING AN ON-SITE MEETING WITH GENERAL CONTRACTORS IS REQUIRED.
17. ELECTRICIAN MUST BE ON SITE FOR ALL INSPECTIONS.
18. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING. ALL CONDUCTORS SHALL BE COPPER AND UNLESS OTHERWISE NOTED THHN INSULATION.
19. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, PLASTIC AND CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
20. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
21. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE N.E.C. OR LOCAL CODES.
22. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
23. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
24. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE THAT CERTIFICATE OF OCCUPANCY IS ISSUED. WARRANTY SHALL BE PROVIDED IN WRITING. PROVIDE COPY TO LL.
26. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
27. ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
28. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT.
29. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE COMPANIES.
30. CONTRACTOR SHALL COORDINATE WITH MECHANICAL DRAWINGS AND PROVIDE ALL NECESSARY CONTROL WIRING.
31. ALL CIRCUIT BREAKERS FEEDING MECHANICAL EQUIPMENT SHALL BE HACR TYPE CIRCUIT BREAKERS.
32. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES, DEVICES, ETC. FOR ALL OUTLETS AS INDICATED.
33. MATERIALS, PRODUCTS, AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SUCH AS APPEAR ON THE UL LIST OF APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF N.E.C. NEMA, AND IECE.
34. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CUT SHEETS OF LIGHTING FIXTURES, SWITCHES, AND OTHER ELECTRICAL ITEMS FOR APPROVAL BY ENGINEER/ARCHITECT.
35. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND FIRED CAULKING REQUIRED OF HIS WORK.
36. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/TYPE WRITTEN DIRECTORIES.
37. ALL ELECTRICAL AND COMMUNICATIONS OUTLETS TO BE AT 24" A.F.F. UNLESS NOTED OTHERWISE, AND VERTICALLY MOUNTED.
38. ALL LIGHT SWITCHES TO BE AT 42" A.F.F.
39. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL WIRING FOR HVAC SYSTEM INCLUDING CONTROLS, THERMOSTATS, POWER, ETC. SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
40. BREAKER AND PANELS – ALL CURRENT CARRYING BUSSES SHALL BE COPPER. ALL GROUND BUS BARS SHALL BE COPPER. PANEL BOARD ENCLOSURES SHALL BE FURNISHED WITHOUT PRE-PUNCHED CONCENTRIC HOLES. A.I.C. RATINGS SHALL BE AS INDICATED ON PANEL BOARD SCHEDULES.
41. DISCONNECT SWITCHES SHALL BE H.P. RATED, GENERAL DUTY, QUICK-MAKE, QUICK-BREAK ENCLOSURES AS REQUIRED BY EXPOSURE.
42. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, WITH OVERLOAD RELAYS IN EACH HOT LEG.
43. THE TERM "PROVIDE" USED IN THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS INDICATES THE CONTRACT SHALL FURNISH AND INSTALL.
44. CONTRACTOR SHALL CONFIRM WITH ANY AND ALL REQUIREMENTS SUCH AS: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, TRANSFORMER SIZE, SCHEDULED DOWN TIME FOR OWNERS CONFIRMATION, ETC. ANY CONFLICTS SHALL BE BROUGHT TO ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.
45. VOLTAGE DROP FOR ALL BRANCH CONDUCTORS SHALL NOT EXCEED 3%, WHERE VOLTAGE DROP EXCEEDS 3%, CONTRACTOR SHALL INCREASE SIZE OF CONDUCTORS.
46. CONTRACTOR SHALL PROVIDE GFI TYPE BREAKER FOR ALL EXTERIOR 120V CIRCUITS OR GFI PROTECTION – FOR THE WHOLE CIRCUIT.
47. GAS PIPING SHALL BE BONDED.
48. ELECTRICAL CONTRACTOR SHALL COORDINATE SERVICE ENTRY WITH SERVICE PROVIDER PRIOR TO DETERMINING EXACT LOCATION OF THE METER BOX IN ORDER TO AVOID DISCREPANCIES BETWEEN DRAWINGS AND JOB CONDITIONS.
49. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
50. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
51. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
52. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
53. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUIDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
54. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
55. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
56. ALL PANELS TO BE UL LABELED WITH BOLT-ON TYPE CIRCUIT BREAKERS.
57. 7-DAY 24-HOUR TIME CLOCK IS REQUIRED TO CONTROL STOREFRONT ENTRY LIGHTS, SHOW WINDOW LIGHTS, SHOW WINDOW RECEPTACLES AND STOREFRONT SIGNAGE. ILLUMINATED STOREFRONT SIGNS MUST REMAIN LIT DURING ALL MALL BUSINESS HOURS.
58. TENANT IS REQUIRED TO MAKE A FIELD SURVEY OF THE EXISTING ELECTRICAL SERVICE TO ENSURE THAT THE TOTAL CONNECTED LOAD DOES NOT EXCEED THE ELECTRIC SERVICE. ANY/ALL MODIFICATIONS OR UPGRADES NEEDED ARE SUBJECT TO LANDLORD'S PRIOR APPROVAL AND WILL BE COMPLETED BY TENANT/TENANT'S GC AT TENANT'S SOLE EXPENSE.
59. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
60. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.

EXISTING CONTIDITONS NOTES

STOP AND READ

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

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	EXHAUST FAN
	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
$	WALL SWITCH (SINGLE)
$T	WALL SWITCH (TIMER)
$OS	OCCUPANCY SENSOR WALL
USB	DUPLEX RECEPTACLE WITH USB PROVISION.
	DUPLEX RECEPTACLE, 46" TO AFF AT KITCHEN, BATHS AND TOPS
	QUADRUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
CL	230V RECEPTACLE
	ELECTRICAL PANEL
	DISCONNECT SWITCH
TV	TELEVISION OUTLET
T	TELEPHONE/DATA OUTLET
	TELEPHONE OUTLET
D	DATA OUTLET
CL	CEILING MOUNTED DATA OUTLET
A	30A/240V NON FUSED DISCONNECT SWITCH
B	60A/240V NON FUSED DISCONNECT SWITCH
C	100A/240V 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
EXHAUST FAN = EF
WATER HEATER= WH
AUTHORITY HAVING JURISDICTION= A.H.J.
BATHROOM EXHAUST FAN= BEF
BELOW COUNTER= BC
PUSH BUTTON= PB
UNDER CABINET= UC
DRYER= DR
ELECTRICAL CONTRACTOR=E.C.
ROOF TOP UNIT= RTU
RECIRCULATION PUMP= RCP
WASHER=WA

GENERAL LIGHTING NOTES

A. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE .

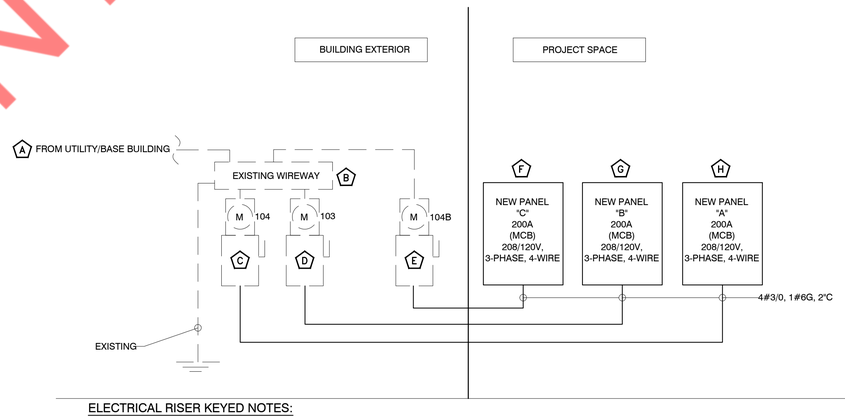
B. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.

LIGHTING SCHEDULE

SYMBOL	TYPE	CATALOG NUMBER	VOLT	DESCRIPTION	REMARKS	WATTS
	A	TBD	120	LED STRIP LIGHT	FLOW AREA	8 W/FT*
	B	SISTEMALUX TRIM FINISH: WHITE CATALOG #: O2-35K_9714-BO-SPS009360	120	6" RECESSED DOWNLIGHT - WHITE	RECEPTION/HALLWAY	30*
	B1	SISTEMALUX TRIM FINISH: BLACK CATALOG #: O2-35K_9714-BO-SPS009360	120	6" RECESSED DOWNLIGHT - BLACK	FLOW AREA	30*
	C	SISTEMALUX TRIM FINISH: WHITE CATALOG #: O5-35K_911R-SPS009410	120	4" RECESSED LIGHT-WHITE	RESTROOMS & SHOWER ROOMS	14.5*
	D	SISTEMALUX TRIM FINISH: WHITE CATALOG #: O3-35K_9922-SPS009359	120	2' x 2' RECESSED LIGHT	LAUNDRY ROOM/OFFICE	26.3*
	E	TROY TRIM FINISH: BLACK CATALOG #: F3819	120	PENDANT LIGHT	LOBBY AREA	40
	F	SISTEMALUX TRIM FINISH: GRAY CATALOG #: O8-35K_3601-SPS011988	120	WALL SCONCE	BATHROOMS/HALLWAY	9.4*
	G	SISTEMALUX FINISH: WHITE CATALOG #: O1-35_8138-SPS011925	120	SEMI RECESSED (3) HEAD LIGHT	RETAIL WALL	30
	H	SISTEMALUX TRIM FINISH: WHITE CATALOG #: O7-35K_I.P475-SPI004441	120	5-CELL LASER BLADE DOWNLIGHT	RECEPTION DESK TASK LIGHT	12.6W
		96" DIA. CEILING FAN BY CANARM FANBASE CP96BK MODEL	120	96" DIA. CEILING FAN MANUFACTURER: CANARM FANBOS MODEL: CP96BK	YOGA STUDIO	61.6
	X2	EMERGENCY LIGHTING X3-LEDCXTEU-1RB	120	EXIT SIGN-EMERGENCY LIGHT COMBO		INTEGRAL
	X1	EMERGENCY LIGHTING X3-LEDCXTEU-1RB	120	DIRECTIONAL EXIT SIGN-EMERGENCY LIGHT COMBO		INTEGRAL
	X	BOW LIGHTING X1-EZXTEU-1RB	120	EXIT SIGN		INTEGRAL
	EU	ISOLITE RL2-LED-4-BK-SD	120	WALL MOUNTED EMERGENCY LIGHT		INTEGRAL
	EU		120	CEILING MOUNTED EMERGENCY LIGHT		INTEGRAL
	(E)			EXISTING		

LIGHTING SCHEDULE NOTES

A. " * " INDICATES LIGHTING FIXTURE WATTAGES ARE ASSUMED. E.C. SHALL COORDINATE WITH ARCHITECT FOR EXACT LIGHT FIXTURE SELECTION INCLUDING MANUFACTURER/CATALOG/WATTAGE/FINISH.



FLOOR LEVEL

ELECTRICAL RISER KEYED NOTES:

A. EXISTING 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE TO REMAIN. E.C. SHALL COORDINATE WITH OWNER/UTILITY COMPANY FOR EXACT POWER DISTRIBUTION.

B. EXISTING 120/208V, 3-PHASE, 4-WIRE WIREWAY TO REMAIN. E.C. TO FIELD VERIFY THE EXACT LOCATION, SIZE & OPERABLE CONDITION OF WIREWAY, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

C. EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE METER "104" AND DISCONNECT SWITCH FOR THE PROJECT SPACE TO REMAIN. E.C. TO FIELD VERIFY THE EXACT LOCATION, SIZE & OPERABLE CONDITION OF METER "104" AND DISCONNECT SWITCH, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

D. EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE METER "103" AND DISCONNECT SWITCH FOR THE PROJECT SPACE TO REMAIN. E.C. TO FIELD VERIFY THE EXACT LOCATION, SIZE & OPERABLE CONDITION OF METER "103" AND DISCONNECT SWITCH, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

E. EXISTING 200A, 120/208V, 3-PHASE, 4-WIRE METER "104B" AND DISCONNECT SWITCH FOR THE PROJECT SPACE TO REMAIN. E.C. TO FIELD VERIFY THE EXACT LOCATION, SIZE & OPERABLE CONDITION OF METER "104B" AND DISCONNECT SWITCH, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.

F. NEW 200A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON THE FIELD.

G. NEW 200A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON THE FIELD.

H. NEW 200A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER ON THE FIELD.

ELECTRICAL RISER SYMBOLS:

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

RISER DIAGRAM GENERAL NOTES:

1. E.C. SHALL COORDINATE WITH UTILITY/OWNER FOR EXISTING INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.

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

LIGHTING PLAN GENERAL NOTES:

1. ALL EXIT, EMERGENCY, AND BATTERY PACKS IN FLUORESCENT FIXTURES TO BE WIRED AHEAD OF CONTROL SWITCH.
2. ALL WALL MOUNTED EMERGENCY LIGHT FIXTURES SHALL BE MOUNTED AT HEIGHTS INDICATED ON THE PLANS.
3. ALL DIMMER SWITCHES SHALL HAVE A PRESET MINIMUM RATING OF 1.0 KW.
4. ALL FIXTURE COUNTS, SELECTIONS, AND EXACT LOCATIONS MUST BE VERIFIED WITH OWNER/ARCHITECT PRIOR TO PURCHASE. CONFIRM ALL LIGHT FIXTURE MODEL NUMBERS, FINISH COLORS AND ELECTRICAL REQUIREMENTS BEFORE ORDERING AND INSTALLATION.
5. CONTRACTOR TO VERIFY IF ANY LOW VOLTAGE LIGHT FIXTURES REQUIRE STEP-DOWN TRANSFORMERS, QUANTITY AND LOCATION TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
6. ALL FIXTURES TO HAVE U.L. CERTIFICATION.

LIGHTING PLAN KEYED NOTES:

- (A) LIGHTING IN THIS AREA SHALL BE CONTROLLED VIA DAY LIGHT SENSOR.
- (B) COORDINATE ALL CEILING FAN 'CANARM FANBOS' ELECTRICAL REQUIREMENTS WITH MFG. PRIOR TO INSTALLATION. PROVIDE/LOCATE/INSTALL CONNECTIONS FOR POWER AND CONTROLS AS INSTRUCTED BY MFG.
- (C) PROVIDE J-BOX UNDER SHELF LIGHTING. COORDINATE WITH ARCHITECT FOR EXACT PLACEMENT AND MOUNTING HEIGHT DETAILS OF THE SAME.
- (D) REMOTE KEY PAD FOR EACH FAN. VERIFY ALL REQUIREMENTS WITH MFG. PRIOR TO INSTALLATION. VERIFY EXACT MOUNTING LOCATION(S) WITH TENANT/ARCH. PRIOR TO ROUGH-IN.
- (E) LIGHTING FIXTURE NEAR ELECTRICAL PANEL SHALL NOT BE CONTROLLED VIA ANY AUTOMATIC MEANS AS PER FEC 110.26 (D).
- (F) LED STRIP LIGHT FIXTURE ABOVE/BELOW/AROUND THE MIRROR. COORDINATE WITH ARCHITECT FOR EXACT PLACEMENT AND MOUNTING HEIGHT DETAILS OF THE SAME.
- (G) EMERGENCY/EXIT LIGHTS ARE WIRED AHEAD OF ANY OCCUPANCY SENSOR/MANUAL SWITCH.
- (H) OVERRIDE SWITCH WITH DIMMING CAPABILITIES WITH PILOT LIGHT FOR CONTROL OF TIME CLOCK. (COORDINATE TOTAL QUANTITIES AND LOCATIONS IN FIELD WITH OWNER/ARCH).
- (I) WIRE THROUGH AN ASTRONOMICAL TIME CLOCK FOR AUTOMATIC CONTROL, FOR COMPLIANCE WITH FBC ENERGY CONSERVATION SECTION.

TIME CLOCK NOTES:

CONTRACTOR TO COORDINATE TOTAL NUMBER OF ZONES/SCENES /INDIVIDUAL AREAS/RECEPTACLES TO BE CONTROLLED BY TIME CLOCK PRIOR TO BID OR PURCHASE.

CONTRACTOR/ARCH/ID TO SELECT TIME CLOCK(S) WITH THE CAPACITY TO CONTROL THE TOTAL NUMBER OF INDIVIDUALLY CONTROLLED LIGHTS/ZONES/RECEPTACLES AS REQUESTED BY THE OWNER & THAT MEETS DIMMING REQUIREMENTS.

CONTRACTOR SHALL COORDINATE THE TOTAL QUANTITY OF OVERRIDE SWITCHES AND CONFIRM FINAL LOCATIONS WITH OWNER/ARCH/ID PRIOR TO BID OR PURCHASE.

FLORIDA BUILDING CODE- LIGHTING CONTROLS:

MANUAL DAY-LIGHTING CONTROLS ARE PROVIDED PER OUR INTERPRETATION AND UNDERSTANDING OF THE CURRENT FBC CODE. CONTRACTOR AND HIS MANUFACTURER SHALL PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM THAT COMPLIES WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES AND THE CURRENT FBC.

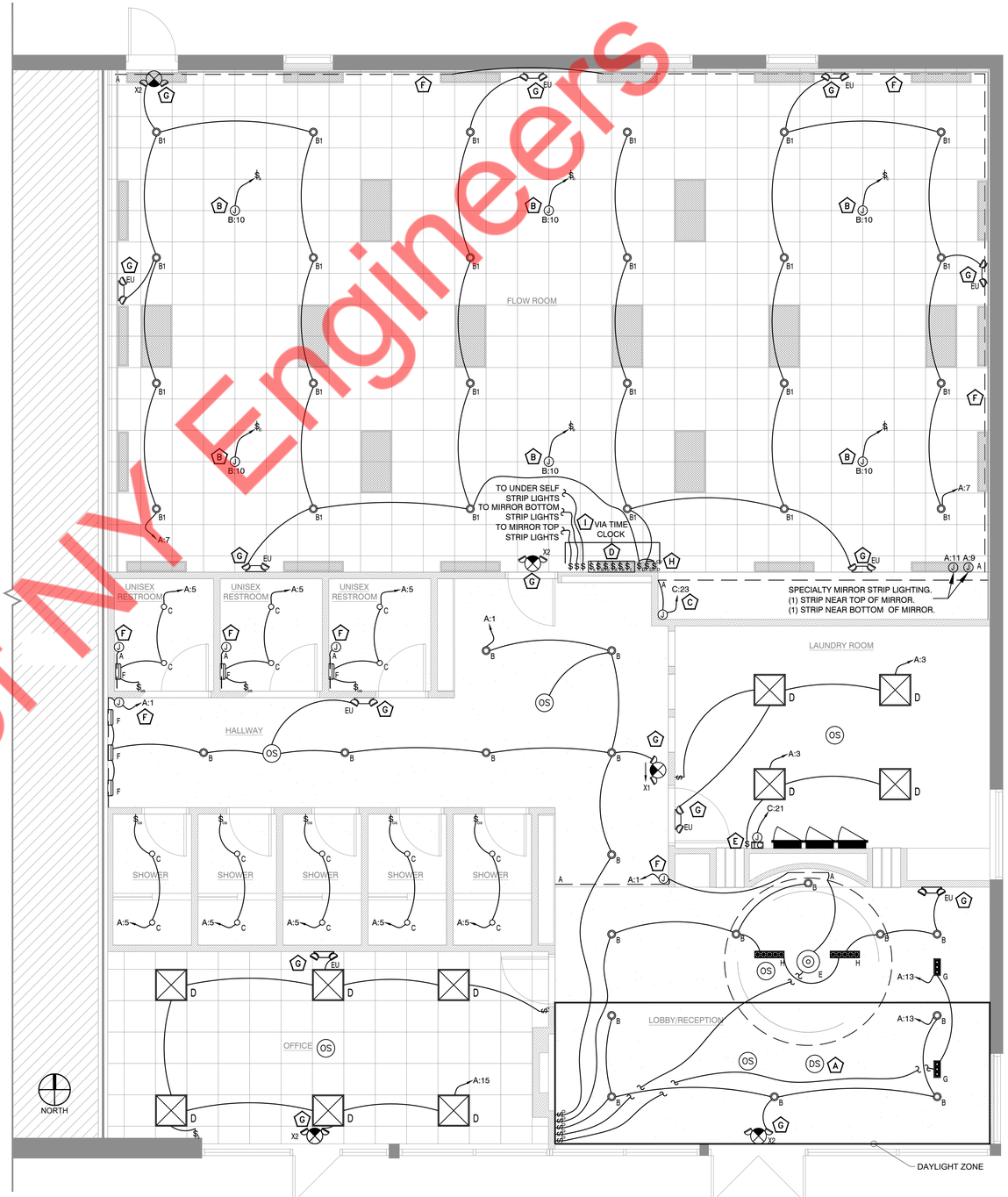
ENERGY COMPLIANCE:

1. AN AUTOMATIC TIME CLOCK SHALL BE THE MEANS OF LIGHTING SHUTOFF PER FBC ENERGY CONSERVATION SECTION FOR ALL AREAS WHERE OCCUPANCY SENSORS ARE NOT USED, AND IT SHALL CONTAIN AN ASTRONOMICAL TIMECLOCK TO SHUT THE TENANT SPACE DOWN AT A SCHEDULED TIME OF DAY.
2. ALL LIGHT CIRCUITS THAT ARE NOT WIRED THROUGH THE ASTRONOMICAL TIME CLOCK SHALL BE CONTROLLED BY OCCUPANCY SENSORS WHICH MUST TURN LIGHTS OFF WITHIN 20 MINUTES AFTER AN OCCUPANT LEAVES THE SPACE AND TURN ON AUTOMATICALLY TO NOT MORE THAN 50% OR BE MANUALLY TURNED ON.
3. RECORD DRAWINGS OF INSTALLATION AND OPERATION MANUALS ARE TO BE PROVIDED TO THE OWNER AS SPECIFIED IN FLORIDA BUILDING CODE ENERGY CONSERVATION SECTION.

LIGHTING SYMBOL LEGEND

$	SWITCH
$DS	DIMMING SWITCH
$MS	MOTOR RATED SWITCH
(J)	JUNCTION BOX
(OS)	CEILING MOUNTED OCCUPANCY SENSOR

COORDINATE ALL SWITCHING /DIMMING REQUIREMENTS WITH TENANTS



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

POWER SYMBOL LEGEND	
	DUPLEX RECEPTACLE
GFI	DUPLEX GFI RECEPTACLE
	HORIZONTAL DUPLEX RECEPTACLE
	CEILING/FLOOR MOUNTED DUPLEX RECEPTACLE
	NON FUSED DISCONNECT SWITCH
	TEL/DATA COMBINATION
TV	TV OUTLET-WALL MOUNTED
	AC INDOOR UNIT
	MOTOR SWITCH
	JUNCTION BOX
	ELECTRICAL PANEL

POWER PLAN GENERAL NOTES:

1. COORDINATE WITH ARCHITECT/OWNER FOR FINAL LOCATION OF OUTLET MOUNTING HEIGHTS.
2. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER/EQUIPMENT MANUFACTURER FOR FINAL ELECTRICAL REQUIREMENT INCLUDING RECEPTACLE, PLUG, CORD, DIRECT CONNECTION, CABLE BREAKER ETC. OF EQUIPMENTS IN FIELD AND PROVIDE THE ELECTRICAL CONNECTION PER MANUFACTURER RECOMMENDATIONS IN FIELD.
3. E.C. SHALL CO-ORDINATE WITH MECHANICAL CONTRACTOR/EQUIPMENT MANUFACTURER FOR FINAL LOCATION & ELECTRICAL REQUIREMENT IN FIELD & ACCORDINGLY PROVIDE CONNECTION.
4. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR HAND DRYER REQUIREMENTS IN TOILETS AND PROVIDE THE ELECTRICAL CONNECTION ACCORDINGLY.

POWER PLAN KEYED NOTES:

A. PROVIDE DISCONNECTS/ELECTRICAL OUTLET AS RECOMMENDED BY EQUIPMENT MANUFACTURER. COORDINATE EXACT LOCATION IN FIELD.

B. GANGED SWITCHES FOR CONTROL OF HEATING PANELS. E.C. SHALL COORDINATE WITH HEATING PANEL MANUFACTURER FOR EXACT CONTROL REQUIREMENT OF HEATING PANELS ON FIELD AND PERFORM ELECTRICAL WORKS ACCORDINGLY. ALSO COORDINATE WITH ARCHITECT FOR THE EXACT LOCATION OF CONTROLS FOR HEATING PANEL.

C. VERIFY MOUNTING HEIGHT FOR ALL TV/DATA/ RECEPTACLES WITH TENANT/ARCH PRIOR TO ROUGH-IN.

D. INSTALL HAND DRYERS PER ALL MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS. VERIFY MOUNTING HEIGHT AND EXACT MOUNTING LOCATION PRIOR TO ROUGH-IN.

E. FOLLOW ALL MFG INSTRUCTIONS FOR HEATER INSTALLATION. VERIFY ALL ELECTRICAL REQUIREMENTS PRIOR TO INSTALL. THE HEATERS SHALL BE PROVIDED BY OWNER AND INSTALLED BY THE ELECTRICAL CONTRACTOR, INCLUDING ANY REQUIRED RELAYS AND TRANSFORMERS.

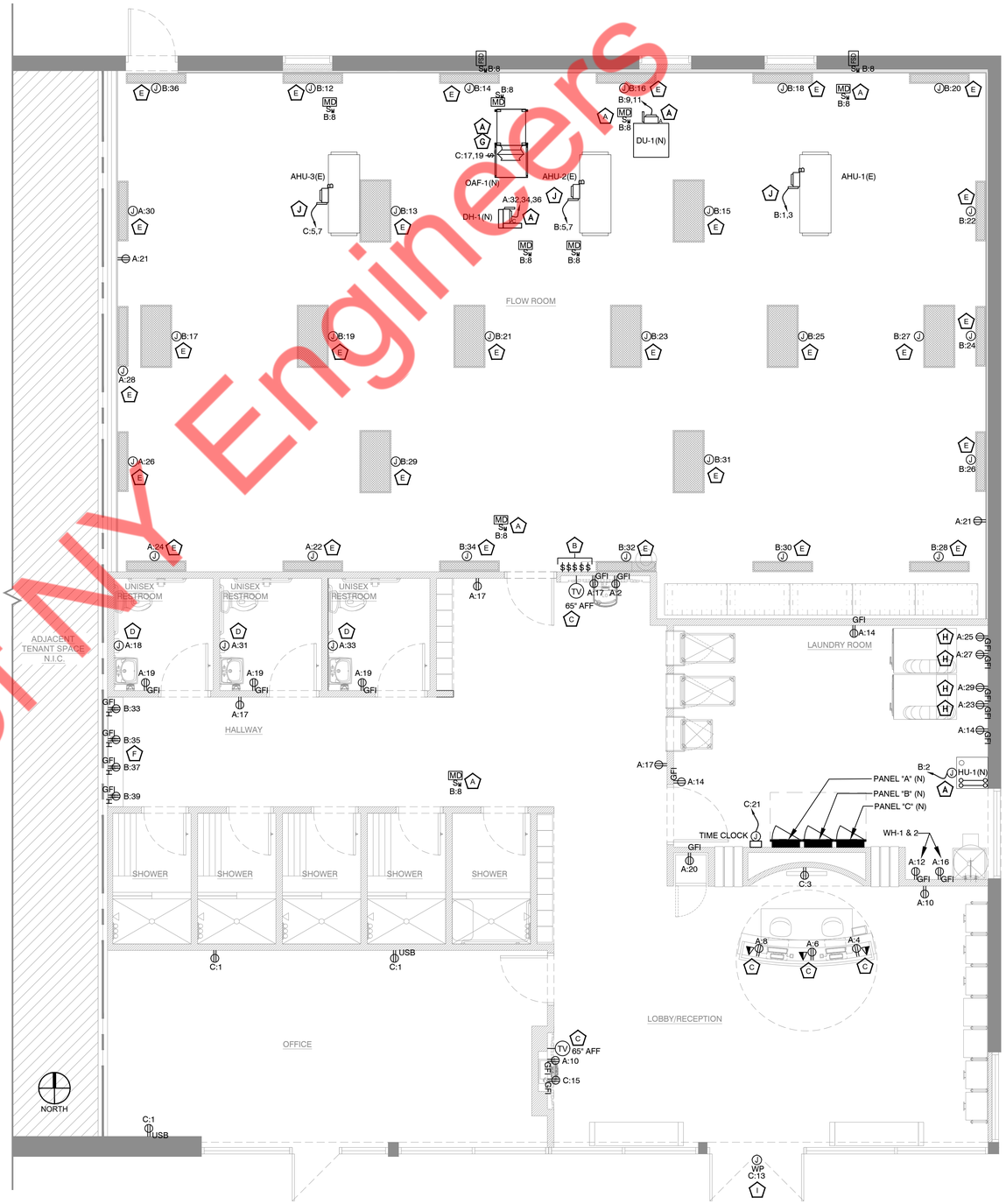
F. GFI RECEPTACLE IN THE BACKSPLASH OF THE COUNTER, HORIZONTALLY MOUNTED FOR HAIR DRYER. E.C. SHALL COORDINATE EXACT LOCATION OF HORIZONTAL GFI RECEPTACLE WITH ARCHITECT/OWNER ON THE FIELD. ALSO, SHALL COORDINATE EXACT POWER REQUIREMENT OF HAIR DRYER PER MANUFACTURER CUT-SHEET AND MAKE ELECTRICAL ARRANGEMENT ACCORDINGLY.

G. EXHAUST FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. CONNECT TO TIME CLOCK FOR CONTROL. COORDINATE WITH MECHANICAL CONTRACTOR IN FIELD FOR THE SAME.

H. E.C SHALL COORDINATE EQUIPMENT MANUFACTURER FOR EXACT ELECTRICAL REQUIREMENT &CONNECTION TYPE PRIOR TO BID. MAKE POWER PROVISION ACCORDINGLY. BASE BID ACCORDINGLY.

I. ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOX WITH TOGGLE DISCONNECTION AS PER FEC FOR CONNECTION TO THE EXTERIOR BUILDING SIGNAGE. THE SIGNS SHOULD BE SUPPLIED WITH WHIPS FOR FINAL CONNECTION TO THIS JUNCTION BOX. E.C. TO COORDINATE WITH THE SIGN VENDOR ON THE QUANTITY AND LOCATION OF THE REQUIRED JUNCTION BOXES. THE CONTRACTOR SHALL PROPERLY SIZE THE JUNCTION BOX BASED ON THE QUANTITY OF CONNECTIONS REQUIRED. VERIFY LOCATION WITH ARCHITECTURAL DRAWINGS AND SIGN VENDOR PRIOR TO INSTALLING. ALL SIGNS SHALL BE CONTROLLED VIA TIME CLOCK.

J. EXISTING MECHANICAL EQUIPMENTS SHALL REMAIN. E.C. SHALL FIELD VERIFY THE OPERABLE CONDITION AND RECONNECT TO NEW CIRCUIT BREAKER AS SHOWN. REPLACE IF FOUND IN OPERABLE. BASE BID ACCORDINGLY



ELECTRICAL FLOOR PLAN

SCALE 1/4" = 1'-0"

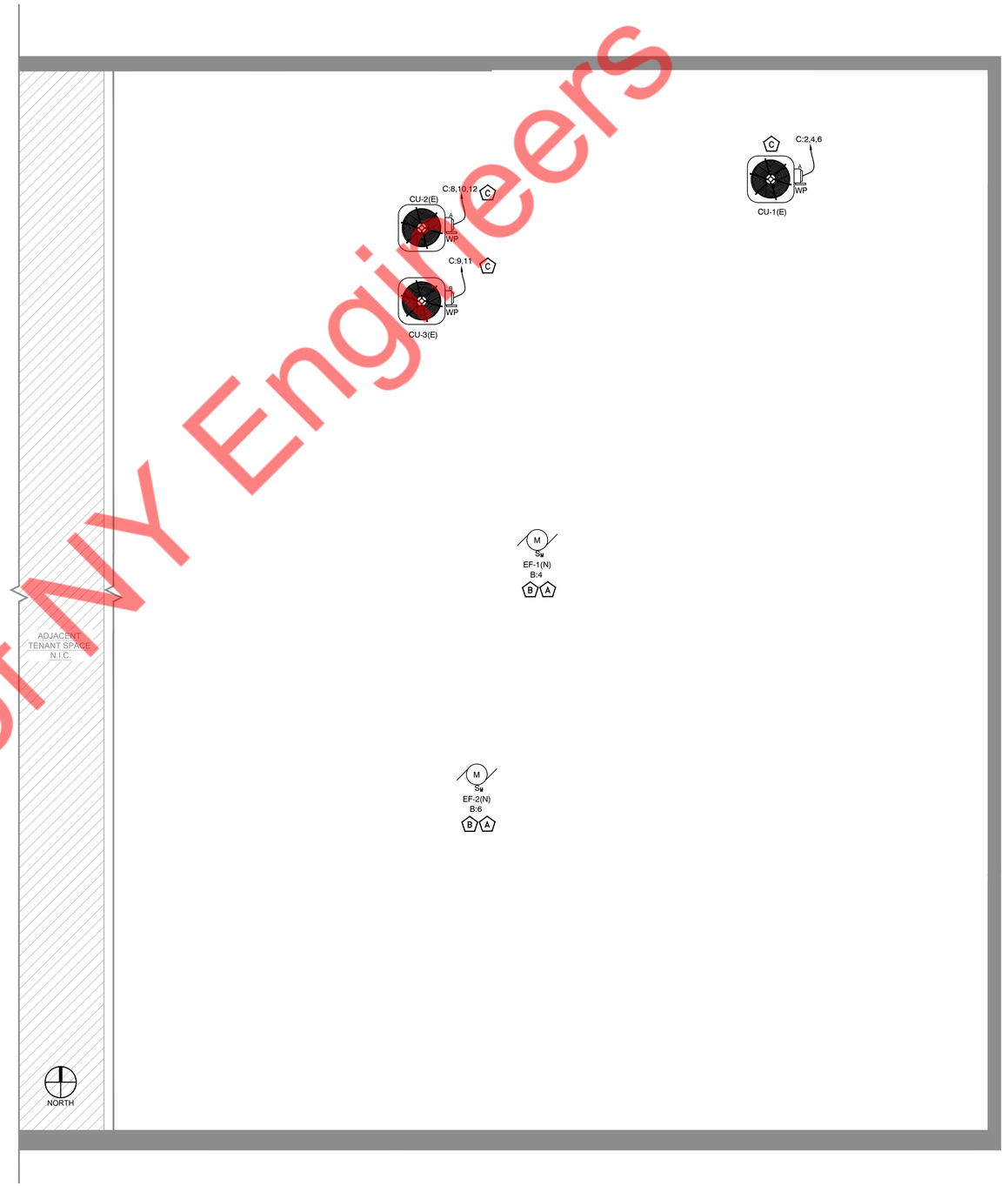
1

ROOF POWER PLAN KEYED NOTES:

A. E.C. TO COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATION, POWER AND CONTROL REQUIREMENTS OF MECHANICAL EQUIPMENT. PROVIDE ELECTRICAL SUPPLY ACCORDINGLY.

B. EXHAUST FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. CONNECT TO TIME CLOCK FOR CONTROL. COORDINATE WITH MECHANICAL CONTRACTOR IN FIELD FOR THE SAME.

C. EXISTING MECHANICAL EQUIPMENTS SHALL REMAIN. E.C. SHALL FIELD VERIFY THE OPERABLE CONDITION AND RECONNECT TO NEW CIRCUIT BREAKER AS SHOWN. REPLACE IF FOUND IN OPERABLE. BASE BID ACCORDINGLY



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

ELECTRICAL PANEL SCHEDULE:-

PANEL:	**A (NEW)**					**MOUNTING:**	SURFACE
208Y/120	VOLTS,	**3**	PHASE,	**4**	WIRE	**PANEL LOCATION:**	LAUNDRY ROOM
MAIN CB:	**200 AMP**	**MLO:**	**N/A**	**BUS:**	**225 AMP** 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	20	HALLWAY AND LOBBY/RECEPTION LIGHT	L	0.86	2#12, #12G, 3/4"C	1.36			2#12, #12G, 3/4"C	0.50	R	DRINKING FOUNTAIN	20	2
3	20	LAUNDRY AREA LIGHT	L	0.12	2#12, #12G, 3/4"C		0.30		2#12, #12G, 3/4"C	0.18	R	RECEPTION PC RECEPTACLE	20	4
5	20	RESTROOM/SHOWERS AREA LIGHT	L	0.30	2#12, #12G, 3/4"C			0.48	2#12, #12G, 3/4"C	0.18	R	RECEPTION PC RECEPTACLE	20	6
7	20	FLOW ROOM LIGHT	L	0.92	2#12, #12G, 3/4"C	1.10			2#12, #12G, 3/4"C	0.18	R	RECEPTION PC RECEPTACLE	20	8
9	20	STUDIO MIRROR LIGHT	L	0.70	2#12, #12G, 3/4"C		1.06		2#12, #12G, 3/4"C	0.36	R	LOBBY AREA RECEPTACLE	20	10
11	20	STUDIO MIRROR LIGHT	L	0.70	2#12, #12G, 3/4"C			0.88	2#12, #12G, 3/4"C	0.18	R	WH-1 IGNITION	20	12
13	20	DAYLIGHT ZONE LIGHT	L	0.21	2#12, #12G, 3/4"C	0.75			2#12, #12G, 3/4"C	0.54	R	LAUNDRY ROOM RECEPTACLE	20	14
15	20	OFFICE LIGHT	L	0.18	2#12, #12G, 3/4"C		0.36		2#12, #12G, 3/4"C	0.18	R	WH-2 IGNITION	20	16
17	20	HALLWAY RECEPTACLE	R	0.72	2#12, #12G, 3/4"C			2.12	2#12, #12G, 3/4"C	1.40	M	HAND DRYER (RESTROOM)	20	18
19	20	RESTROOM RECEPTACLE	R	0.54	2#12, #12G, 3/4"C	1.24			2#12, #12G, 3/4"C	0.70	E	12_DISPLAY REFRIGERATOR	20	20
21	20	FLOW ROOM RECEPTACLE	R	0.36	2#12, #12G, 3/4"C		1.86		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	22
23	20	DRYER IGNITION	R	0.18	2#12, #12G, 3/4"C			1.68	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	24
25	20	DRYER IGNITION	R	0.18	2#12, #12G, 3/4"C	1.68			2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	26
27	20	WASHER	E	1.50	2#12, #12G, 3/4"C		3.00		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	28
29	20	WASHER	E	1.50	2#12, #12G, 3/4"C			3.00	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	30
31	20	HAND DRYER (RESTROOM)	M	1.40	2#12, #12G, 3/4"C	11.36			3#3, #8G, 1"C	9.96	H			32
33	20	HAND DRYER (RESTROOM)	M	1.40	2#12, #12G, 3/4"C		11.36			9.96	H	DH-1 (N)	100-3P	34
35	20	SPARE						9.96		9.96	H			36
37	20	SPARE				0.00						SPARE	20	38
39	20	SPARE					0.00					SPARE	20	40
41	20	SPARE						0.00				SPARE	20	42
				TOTAL CONNECTED LOAD (KVA)		**17.48**	**17.94**	**18.12**						

PANEL:	**B (NEW)**					**MOUNTING:**	SURFACE
208Y/120	VOLTS,	**3**	PHASE,	**4**	WIRE	**PANEL LOCATION:**	LAUNDRY ROOM
MAIN CB:	**200**	**MLO:**	**N/A**	**BUS:**	**225 AMP** 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	60-2P	AHU-1 (E)	H	4.68	2#6, #10G, 3/4"C	4.91			2#12, #12G, 3/4"C	0.23	H	HU-1 (N)	20	2
3			H	4.68			6.12		2#10, #10G, 3/4"C	1.44	M	EF-1 (N)	30	4
5	60-2P	AHU-2 (E)	H	4.68	2#6, #10G, 3/4"C			5.23	2#12, #12G, 3/4"C	0.55	M	EF-2 (N)	15	6
7			H	4.68		5.08			2#12, #12G, 3/4"C	0.40	M	MOTORIZED DAMPER	20	8
9	20-2P	DU-1 (N)	H	1.13	2#12, #12G, 3/4"C		1.50		2#12, #12G, 3/4"C	0.37	M	STUDIO FAN - 1, 2, 3, 4, 5 & 6	20	10
11			H	1.13				2.63	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	12
13	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C	2.75			2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	14
15	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C		2.75		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	16
17	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C			2.75	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	18
19	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C	2.75			2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	20
21		STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C		2.75		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	22
23	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C			2.75	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	24
25	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C	2.75			2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	26
27	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C		2.75		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	28
29	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C			2.75	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	30
31	20	STUDIO CEILING HEATER	H	1.25	2#12, #12G, 3/4"C	2.75			2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	32
33	20	HAIR DRYER	O	1.40	2#12, #12G, 3/4"C		2.90		2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	34
35	20	HAIR DRYER	O	1.40	2#12, #12G, 3/4"C			2.90	2#12, #12G, 3/4"C	1.50	H	STUDIO COVE HEATERS	20	36
37	20	HAIR DRYER	O	1.40	2#12, #12G, 3/4"C	1.40						SPARE	20	38
39	20	HAIR DRYER	O	1.40	2#12, #12G, 3/4"C		1.40					SPARE	20	40
41	20	SPARE						0.00				SPARE	20	42
					TOTAL CONNECTED LOAD (KVA)	**22.39**	**20.16**	**19.01**						

PANEL:	**C (NEW)**					**MOUNTING:**	SURFACE
208Y/120	VOLTS,	**3**	PHASE,	**4**	WIRE	**PANEL LOCATION:**	LAUNDRY ROOM
MAIN CB:	**200**	**MLO:**	**N/A**	**BUS:**	**225 AMP** 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	20	OFFICE AREA RECEPTACLE	R	0.54	2#12, #12G, 3/4"C	3.42			3#10, #10G, 3/4"C	2.88	H			2
3	20	RECEPTION LED LOGO	R	0.18	2#12, #12G, 3/4"C		3.06			2.88	H	CU-1 (E)	30-3P	4
5	60-2P	AHU-3 (E)	H	4.99	2#6, #10G, 3/4"C			7.87		2.88	H			6
7			H	4.99		7.87				2.88	H			8
9	40-2P	CU-3 (E)	H	3.33	2#8, #10G, 3/4"C		6.21		3#10, #10G, 3/4"C	2.88	H	CU-2 (E)	30-3P	10
11			H	3.33				6.21		2.88	H			12
13	20	SIGNAGE	L	1.20	2#12, #12G, 3/4"C	1.20						SPARE	20	14
15	20	BOTTLE FILLER	R	0.50	2#12, #12G, 3/4"C		0.50					SPARE	20	16
17	20-2P	OAF-1 (N)	M	1.62	2#12, #12G, 3/4"C			1.62				SPARE	20	18
19			M	1.62		1.62						SPARE	20	20
21	20	TIME CLOCK	O	0.30	2#12, #12G, 3/4"C		0.30					SPARE	20	22
23	20	FLOW ROOM UNDER CONTROL STRIP LIGHT	L	0.20	2#12, #12G, 3/4"C			0.20				SPARE	20	24
25	20	SPARE				0.00						SPARE	20	26
27	20	SPARE					0.00					SPARE	20	28
29	20	SPARE						0.00				SPARE	20	30
31	20	SPARE				0.00						SPARE	20	32
33	20	SPARE					0.00					SPARE	20	34
35	20	SPARE						0.00				SPARE	20	36
37	20	SPARE				0.00						SPARE	20	38
39	20	SPARE					0.00					SPARE	20	40
41	20	SPARE						0.00				SPARE	20	42
					TOTAL CONNECTED LOAD (KVA)	**14.11**	**10.07**	**15.90**						

PLUMBING SPECIFICATIONS

ALL WORK TO BE DONE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2023, EIGHTH EDITION OF THE PLUMBING SECTION AND TO COMPLY WITH ALL LOCAL RULES AND ORDINANCES.

1. ALL WORKMANSHIP & MATERIALS TO BE IN STRICT ACCORDANCE WITH APPLICABLE NATIONAL, STATE, LOCAL CODES, RULES & ORDINANCES.
2. CONTRACTOR SHALL VISIT THE JOB SITE & THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
3. ALL MATERIALS TO BE NEW.
4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST-CLASS WORK MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE.
5. ALL EXCAVATION & BACK FILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
6. REQUIRED INSURANCE SHALL BE PROVIDED BY THIS CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY & PROPERTY DAMAGE FOR THE DURATION OF WORK.
7. CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS & TEST. SUBSTITUTIONS BY THE CONTRACTOR SHALL HAVE PRIOR APPROVAL. ANY CHANGES MADE WITHOUT APPROVAL WILL BE PAID BY THE CONTRACTOR TO RETURN TO THE ORIGINAL DESIGN.
8. EXISTING PIPE SIZES TO BE VERIFIED BY THE PLUMBER AND UPGRADED IF NOT LARGE ENOUGH TO ACCOMMODATE LOAD.
9. ALL WORK TO BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROCESS OF CONSTRUCTION.
10. THE CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REVIEW OF THE GENERAL NOTES, SPECIFICATIONS, AND ALL OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS.
11. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. FIELD VERIFY FINAL LOCATIONS FOR EQUIPMENT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DIMENSIONS AND EXACT LOCATION OF PLUMBING FIXTURES. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS.
12. DRAWINGS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
13. VERIFY LOCATION, SIZE, TRAPS, INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES. ANY COST RESULTING FROM DISCREPANCIES NOT REPORTED AT THIS TIME SHALL BE PAID BY THE CONTRACTOR.
14. INSTALL SIOUX CHIEF 650 SERIES WATER HAMMER ARRESTORS IN PIPING TO QUICK-CLOSING VALVES AS DEFINED IN FLORIDA PLUMBING CODE.
15. PROVIDE SHUT-OFF VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE.
16. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS.
17. CAP ALL PIPING OPENINGS DURING CONSTRUCTION UNTIL FINAL CONNECTIONS TO EQUIPMENT AND ACCESSORIES ARE MADE.
18. SANITARY PIPE 2 1/2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT. SANITARY PIPE 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT. CONDENSATE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT.
19. WHERE SOIL CONDITIONS REQUIRE THE USE OF PIER, OR PILING SUPPORTED GRADE BEAM CONSTRUCTION OR WHERE SOIL CONDITIONS ARE SUSCEPTIBLE TO WASH OUT DURING HIGH WATER LEVELS, OR IN FILLED GROUND WHERE THE SOIL COMPACTION IS LESS THAT 95% OR AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION, THE SANITARY PIPING TO BE INSTALLED BY TRENCHING INTO THE FILL AND THEN PUTTING HANGERS WITH SUPPORT RODS ON THE PIPES AS THEY ARE INSTALLED. THE HANGER RODS EXTENDING UPWARD TO BE EMBEDDED IN AND ANCHORED IN THE CONCRETE PER ASTM F2536-06B AND UNDERGROUND PIPE SHALL BE CAST IRON SCHEDULE 40 PIPING OR SOLID CORE PVC WHICH SHALL CONFORM TO ASTM STANDARD D2665.
20. DO NOT ROUTE ANY WET PIPING OVER ELECTRICAL EQUIPMENT.
21. WATER PIPING TO BE TYPE "L" COPPER ABOVE AND TYPE "K" COPPER BELOW GRADE.
22. SOIL, WASTE, VENT AND STORM PIPING TO BE PVC SCHEDULE #40 DWV CONFORMING TO ASTM D2665 FOR UNDERGROUND AND AS PER FLORIDA BUILDING CODE PLUMBING 2023 (8TH EDITION) TABLE 702.2 & 702.3. CAST IRON SHALL BE USED IN COMMON PLENUM AREAS.
23. RAINWATER/STORMWATER TO BE SCHEDULE #40 DWV, INSULATE WITH ARMAFLEX INSULATION WHEN IN COMMON PLENUM.
24. HOT WATER, TEMPERED WATER AND HOT WATER RETURN PIPES TO BE INSULATED WITH ARMAFLEX INSULATION FROM THE WATER HEATER TO THE FURTHEST FIXTURE PER 2023 FBC (8TH EDITION) PLUMBING 607.2.1.
25. THE DISCHARGE WATER TEMPERATURE FROM LAVATORIES, BIDETS & GROUP WASH FIXTURES LOCATED IN PUBLIC TOILET FACILITIES PROVIDED FOR CUSTOMERS, PATRONS AND VISITORS SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 110°F (43°C) BY A WATER TEMPERATURE LIMITING DEVISE CONFORMING TO ASSE 1070 OR CSA B125.3.
26. WHERE DISSIMILAR METALS ARE TO BE JOINED, APPROVED INSULATING UNIONS SHALL BE USED.
27. ALL PLUMBING PIPES PENETRATING FIRE RATED WALLS, CEILINGS AND/ OR FLOORS SHALL BE PROVIDED WITH U.L. APPROVED FIRE RATED ASSEMBLY. (EQUAL TO WALL FIRE RATING - SEE ARCHITECTURAL DRAWINGS).
28. HOT WATER EXPANSION LOOPS SHALL BE INSTALLED AS REQUIRED TO PARTLY ABSORB TENSION OR COMPRESSION PRODUCED DURING ANTICIPATED CHANGE IN TEMPERATURE. INSTALL EXPANSION JOINTS OF SIZES OF PIPING IN WHICH THEY ARE INSTALLED. INSTALL ALIGNMENT GUIDES TO GUIDE EXPANSION AND TO AVOID LOADING STRESS.
29. NO PVC PIPING TO BE USED IN COMMON PLENUM AREAS.
30. WHERE CEILING SPACE IS A COMMON PLENUM NO COMBUSTIBLE MATERIALS ALLOWED.
31. CONDENSATE LINES TO BE COPPER/PVC DEPENDING ON PROJECT REQUIREMENTS. INSULATE WITH ARMAFLEX INSULATION.
32. FLUSH OUT EXISTING WATER PIPING, STERILIZE THE NEW WATER PIPING LINES BY INTRODUCING IN THEM A SOLUTION OF CALCIUM HYPOCHOLORITE OR CHLORIDE OF LIME OPEN AND CLOSE ALL NEW VALVES WHILE SYSTEM IS BEING CHLORINATED. AFTER THE STERILIZING AGENT HAS BEEN APPLIED FOR 24 HOURS, TEST FOR RESIDUAL CHLORINE AT THE ENDS OF LINES. IF LESS THAN 10 PARTS PER MILLION IS INDICATED, REPEAT THE PROCESS. WHEN TESTS SHOW AT LEAST 10 PARTS PER MILLION OF RESIDUAL CHLORINE, FLUSH OUT THE SYSTEM UNTIL ALL TRACES OF THE CHEMICAL USED ARE REMOVED. MAKE NECESSARY CONNECTIONS TO STERILIZE PIPING.
33. AFTER STERILIZATION HAS BEEN ACCOMPLISHED INITIATE A BACTERIOLOGICAL TEST PERFORMED BY AN APPROVED TESTING LABORATORY. WATER SHALL BE DRAWN FROM THE SYSTEM AT A POINT FURTHEST FROM THE WATER ENTRANCE TO THE BUILDING. A CERTIFIED TEST REPORT OF THESE TESTS RESULTS INDICATING SATISFACTORY COLIFORM COUNT, COLOR AND CHLORINE RESIDUAL SHALL BE PRESENTED TO THE ARCHITECT AND OWNER WHEN THE WATER SUPPLY PIPING SYSTEM IS SUBSTANTIALLY COMPLETED DURING CONSTRUCTION. ANOTHER SIMILAR TEST SHALL BE PERFORMED AT THE TIME OF ISSUANCE OF THE CERTIFICATE OF OCCUPANCY WITH ANOTHER CERTIFIED TEST REPORT PRESENTED TO THE ARCHITECT AND OWNER AT THAT TIME.
34. FEDERAL LAW MANDATES AS OF JANUARY 4, 2017 THE WETTED SURFACE OF EVERY PIPE, FIXTURE AND FITTING INSTALLED IN POTABLE WATER APPLICATIONS SHALL NOT CONTAIN MORE THAN 0.25% LEAD BY WEIGHT. SOLDER AND FLUX SHALL NOT CONTAIN MORE THAN 0.2% LEAD. NON-COMPLIANCE MAY RESULT IN FINES, INSTALLED PRODUCT REMOVAL COSTS, LAWSUITS BY PRIVATE PARTIES OR GOVERNMENT AGENCY.
35. CONTRACTOR SHALL GUARANTEE ALL MATERIALS & WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE. 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.
36. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO BID AND INSTALLATION. INFORM THE ENGINEER OF RECORD OF ANY DISCREPANCY BETWEEN THE DOCUMENTS AND THESE CONDITIONS AND HE SHALL INCLUDE IN HIS BID TO CORRECT THE SAME AS DIRECTED. THE ENGINEER AND THE ARCHITECT ARE NOT RESPONSIBLE FOR ANY ADDITIONAL COSTS RESULTING FROM VERIFIABLE EXISTING CONDITIONS DISCOVERED AFTER THE CONTRACT HAS BEEN AWARDED.
37. CONTRACTOR SHALL KEEP AS-BUILTS AND SUBMIT TO THE ENGINEER OF RECORD FOR REVIEW. ALL CHANGES SHALL BE FORWARDED A MINIMUM OF (2) WEEKS PRIOR TO FINAL INSPECTION. ANY EXPENSES, SUCH AS REVISIONS OR AS-BUILTS, NECESSARY FOR FINAL C.O. SHALL BE AT THE EXPENSE OF THE OWNER.

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 2023 FLORIDA ENERGY CONSERVATION CODE , 8TH EDITION SECTION C403.2.10 REFER 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
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

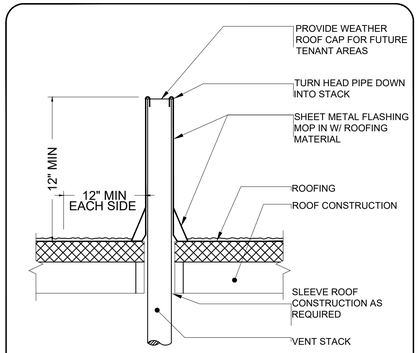
2. HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER FLORIDA ENERGY CONSERVATION CODE 2023, 8TH EDITION, C404.5.1. THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
½"	2'	43'
¾"	0.5'	21'
1"	0.5'	13'
1¼"	0.5'	8'
1½"	0.5'	6'
2" OR LARGER	0.5'	4'

3. WATER DISTRIBUTION SYSTEM AS PER FLORIDA ENERGY CONSERVATION CODE 2023, 8TH EDITION, C404.7, HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED-WATER SUPPLY PIPE BACK TO THE HEATED-WATER SOURCE THROUGH A COLD-WATER SUPPLY PIPE. SHALL BE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING

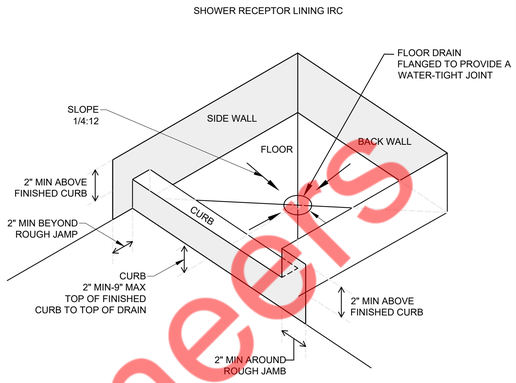
a. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
b. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).

4. AS PER FLORIDA ENERGY CONSERVATION CODE 2023, 8TH EDITION, C404.6.1 HEATED-WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.



VENT THRU ROOF DETAIL
NOT TO SCALE

VENT THRU ROOF DETAIL NOTE
ANY VENT WITHIN 10'-0" OF ANY DOOR, WINDOW, OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3'-0" ABOVE SUCH OPENING



SHOWER PAN DETAIL
NOT TO SCALE

PLUMBING LEGEND

SAN	SANITARY SEWER PIPING
V	VENT PIPING
	DOMESTIC COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
G	GAS PIPING
	PIPE RISE
	PIPE DROP
	FLOOR CLEAN OUT
	P-TRAP
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
FCO	FLOOR CLEAN OUT
CD	CONDENSATE DRAIN
	GATE VALVE
	WALL CLEAN OUT
FD	FLOOR DRAIN
	TRENCH DRAIN
	BALANCING VALVE
	GAS PLUG VALVE
	POINT OF CONNECTION
	THERMOSTATIC MIXING VALVE

PLUMBING CALCULATIONS

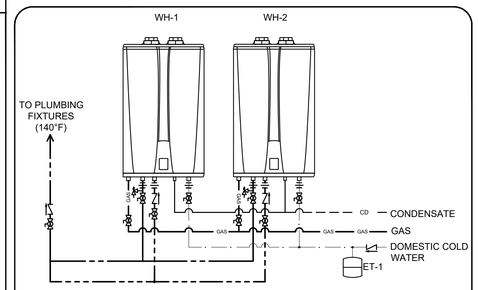
Hot & Cold Water Sizing			Table E103.3(2) - Load Values (2023 Florida Plumbing Code, 8th edition)					
			Load Values, in Water Supply Fixture Units (wsfu)			Total Water Supply Fixture Units for Building		
Fixture	Occupancy	Qty.	Cold	Hot	Total	Cold	Hot	Total
Drinking Fountain	Offices,etc.	1	0.25		0.25	0.25	-	0.25
Lavatory	Public	3	1.5	1.5	2	4.5	4.5	6
Mop Sink	Offices,etc.	1	2.25	2.25	3	2.25	2.25	3
Shower Head	Public	5	3	3	4	15	15	20
Washing machine (15 lb)	Public	2	3	3	4	6	6	8
Bottle Filler	Offices,etc.	1	0.25		0.25	0.25	-	0.25
Water Closet	Public	3	5		5	15	-	15
Total FU.						**43.25**	**27.75**	**52.5**
Min. Pipe Size						**1.25"**	**1"**	**1.50"**

Sanitary Sizing		Table 709.1 - 2023 Florida Plumbing Code	
Fixture	TOTAL	Load Values, (DFU)	Total DFU for Building
Drinking Fountain	1	0.5	0.5
Lavatory	3	1	3
Mop Sink	1	5	5
Shower Head	5	3	15
Washing machine (15 lb)	2	3	6
Water Closet	3	4	12
Bottle Filler	1	0.5	0.5
Floor Drain	5	5	25
Total FU			67
Min. Pipe Size.			**4"**

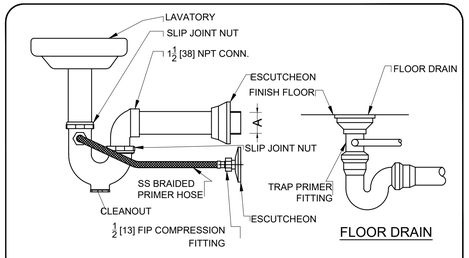
Maximum Flow Rates & Consumption	Table 604.4 - 2023 Florida Plumbing Code
Fixture	Max. Flow Rate
Lavatory, private	2.2gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering yccle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower Head	2.5 gpm at 60 psi
Sink Faucet	2.2 gpm at 60 psi
Urinal	1.0 gallon per flushing cycle
Water Closet	1.6 gallon per flushing cycle

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	QTY	Manufacturer	Model No.	CW	HW	GAS	WASTE	VENT	P-TRAP	Remarks
WC	ADA TOILET	3	KOHLER	CATALOG: K-3519 FINISH: WHITE HIGHLINE CLASSIC COMFORT HEIGHT	3/4"			4"	2"		SEAT TO BE PROFLO ANTI-MICROBIAL ELONGATED # PFTSCOFA2000WH
LAV	ADA WALL HUNG LAVATORY	3	KOHLER	SOHO K-2084 WHITE	1/2"	1/2"		2"	1-1/2"	2"	PROVIDE WITH THERMOSTATIC MIXING VALVE. LIMIT TEMPERATURE OF HOT WATER TO 110 DEG F.
			DELTA	FAUCET: 567LF-SSPP STAINLESS BRUSHED							
BF	BOTTLE FILLER	1	KOHLER	EZH20 BOTTLE FILLING STATION # LZWSM8K	1/2"			2"	1-1/2"	2"	
DF	LO DRINKING FOUNTAIN W/ BOTTLE FILLER	1	ELKAY	LZS8WSSP	1/2"			2"	1-1/2"	2"	
MS	MOP SINK	1	PROFLO	SINGLE BASIN UTILITY SINK- WALL MOUNTED #PFLT2123W	3/4"	3/4"		3"	2"	3"	INCLUDE WALL MOUNT KIT & PROFLO FAUCET MODEL #PF1119. PROVIDE SOLID BLOCKING
SH-1	RAINFALL SHOWER	4	DELTA	T17251-H20	3/4"	3/4"		3"	2"	3"	
	SHOWER CONTROL	5	DELTA	T27867							SHOWER CONTROL SHALL BE AS PER FLORIDA PLUMBING CODE 2023 (423.3)
	SHOWER DIVERTER	5	DELTA	22000	3/4"	3/4"					
	SHOWER PAN	5									REFER PLUMBING SHEET P-1 FOR SHOWER PAN DETAILS. SHOWER PAN SHALL BE AS PER FLORIDA PLUMBING CODE 2023 (421.5.2)
SH-2	ADJUSTABLE/ DETACHABLE HAND HELD SHOWER HEAD	1	DELTA	57530	3/4"	3/4"		3"	2"	3"	
W/D	COMMERCIAL STACKABLE WASHER/DRYER	2	UNIMAC	UST050N			1"				
FD	FLOOR DRAIN	5	ZURN	Z-415-P				3"	2"	3"	PROVIDE RESTROOM FD WITH TRAP PRIMER.
TD	TRENCH DRAIN (STAINLESS STEEL LINT TROUGH)	1	WATTS	LI-4-LT				4"	2"	4"	

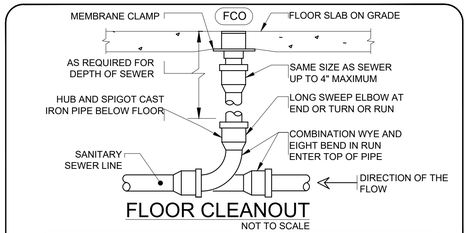


HIGH TEMP DOMESTIC WATER HEATER
NOT TO SCALE



FLOOR DRAIN

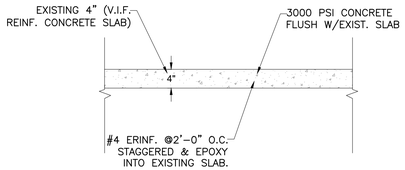
TRAP RESEAL DETAIL
NOT TO SCALE



FLOOR CLEANOUT
NOT TO SCALE

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

REINFORCED SLAB DETAIL



SANITARY KEYED NOTES

1. CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND INVERT OF EXISTING SANITARY WASTE LINE.
2. ROUTE INDIRECT WASTE FROM WASHER/DRYER MACHINE (W/D) TO TRENCH DRAIN. REFER DETAIL ABOVE FOR TRENCH DRAIN SPECS AND INSTALLATION.
3. ROUTE 3/4" CONDENSATE WASTE LINE FROM HUMIDIFIER UNIT (HU-1) IN CEILING TO TRENCH DRAIN.
4. ROUTE 3/4" CONDENSATE WASTE LINE FROM DEHUMIDIFIER UNIT (DU-1) IN CEILING, THRU WALL AND CONNECT TO STORM WATER DOWNSPOUT ON THE EXTERNAL WALL.
5. ROUTE INDIRECT WASTE FROM WATER HEATERS (WH-1) & (WH-2) TO MOP SINK. WITH APPROVED AIR GAP.

GENERAL NOTES

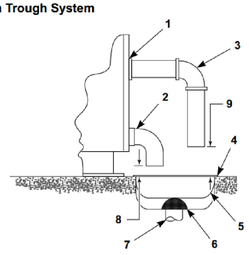
1. SLOPE OF DRAINAGE PIPING SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" AND 1/4" PER FOOT OF RUN FOR PIPE 2-1/2" AND SMALLER. VENT PIPING SHALL BE PITCHED TO DRAIN.
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. PROVIDE ACCESS PANELS FOR CLEANOUTS AS REQUIRED.
5. REFER SANITARY RISER DIAGRAM FOR ALL PIPE SIZES.

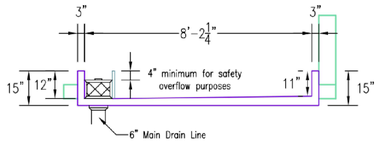
TRENCH DRAIN DETAIL

TROUGH DETAIL

Trough slopes 1/8" per foot toward drain

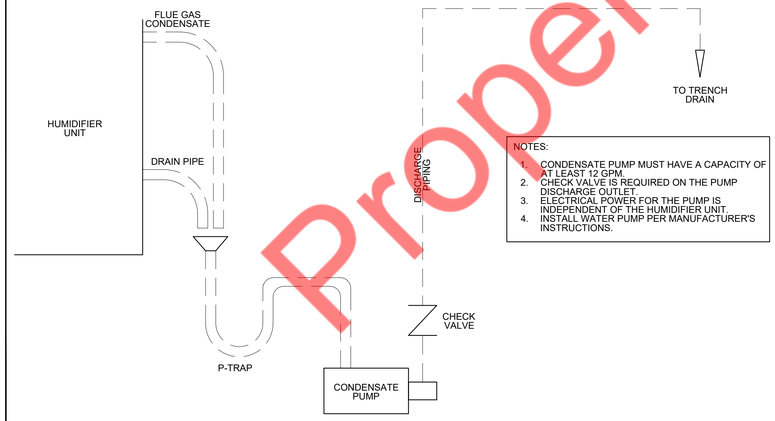
Drain Trough System

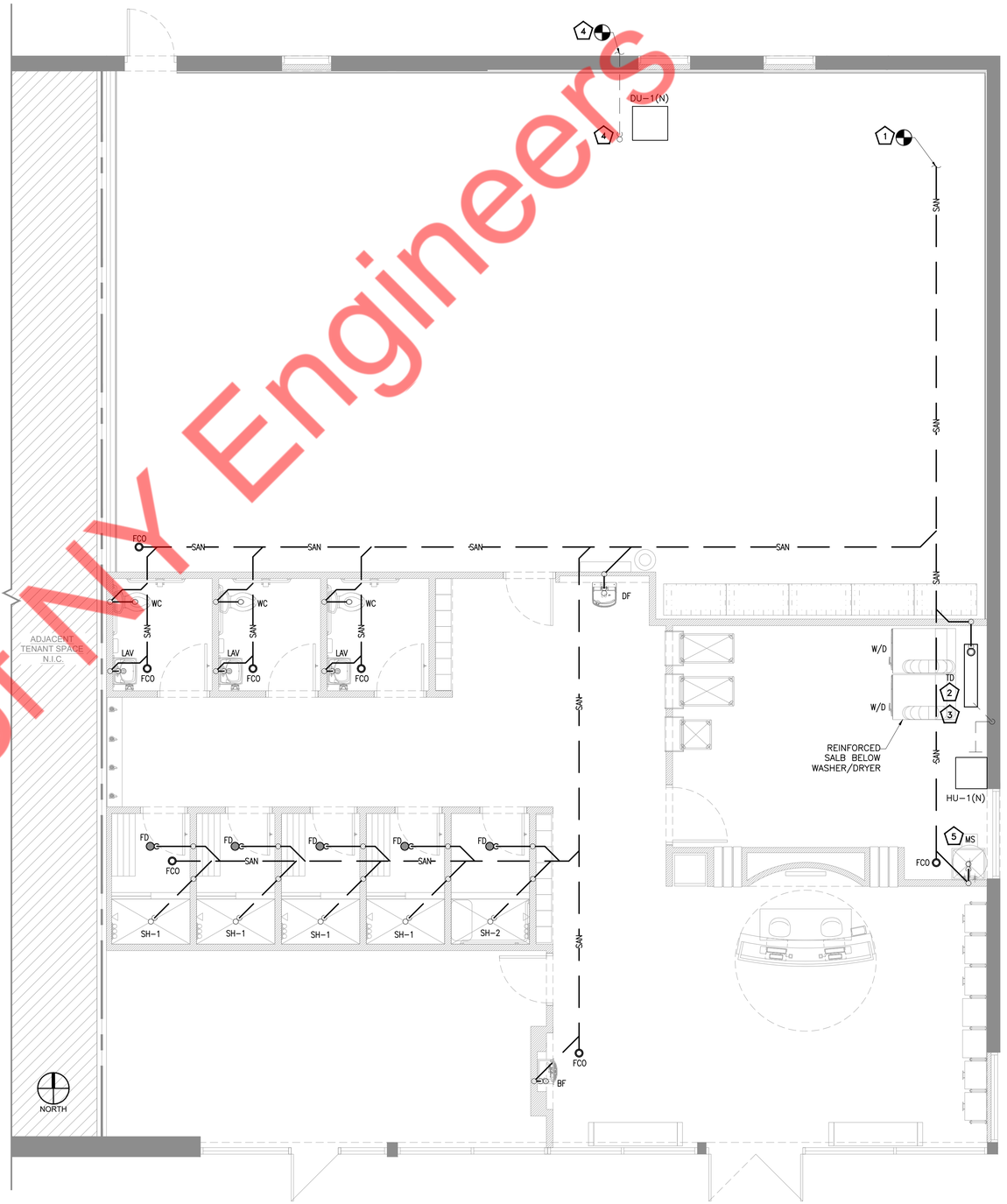




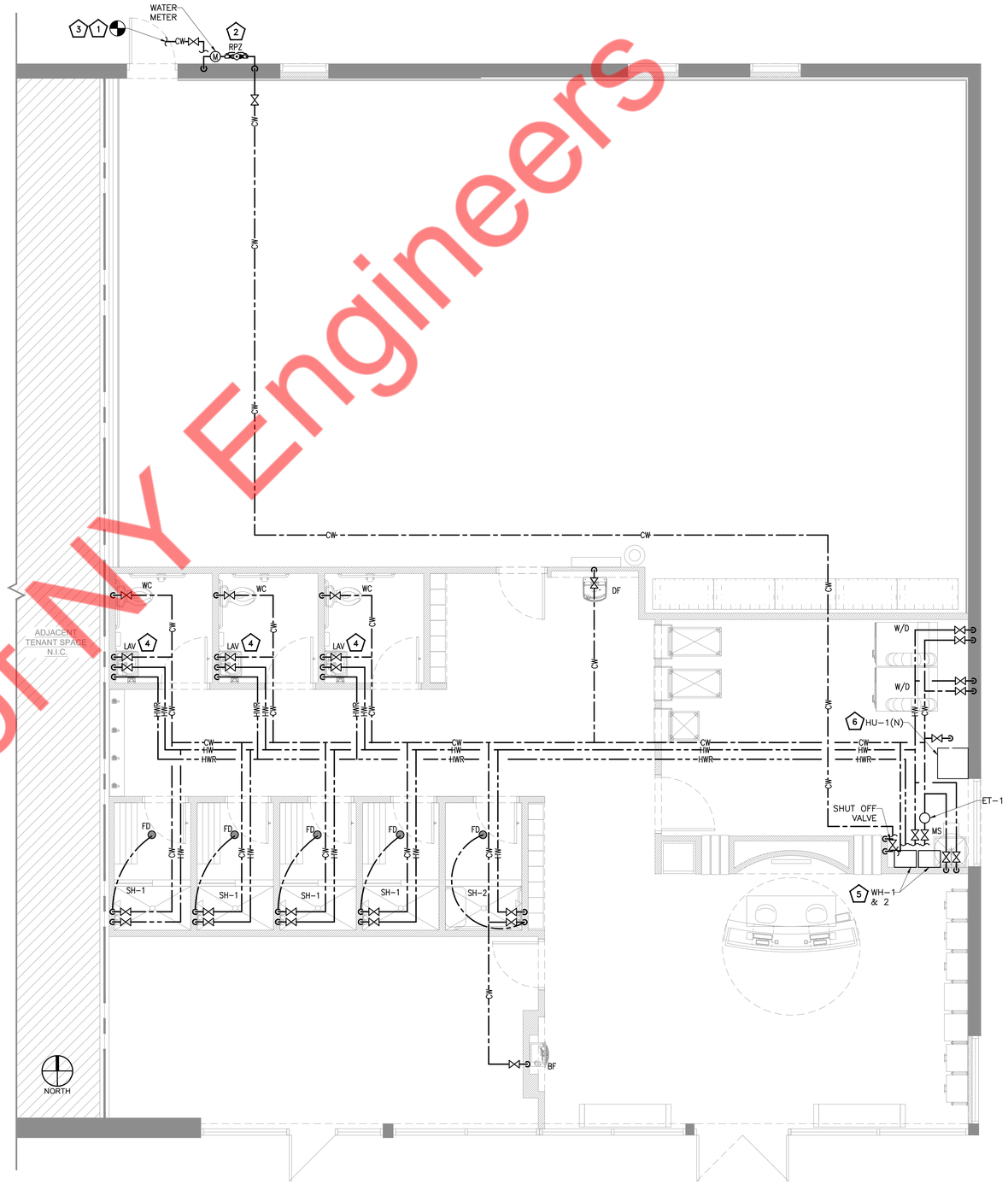
1. Rear of Machine
2. Drain Pipe
3. Overflow Pipe (optional)
4. Steel Grate
5. Drain Trough
6. Strainer
7. Waste Line
8. 1 in. [25 mm] minimum gap
9. 3 in. [76 mm] minimum gap

HUMIDIFIER CONDENSATE DRAIN & P-TRAP DETAIL





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



WATER KEYED NOTES

1. CONNECT NEW 1-1/2" COLD WATER LINE TO EXISTING COLD WATER LINE ABOVE CEILING. CONTRACTOR TO VERIFY EXACT LOCATION, SIZE CONNECTION POINT IN FIELD.
2. COORDINATE REQUIREMENT OF WATER METER & RPZ BACKFLOW PREVENTER WITH LANDLORD.
3. NO TAP OFF SHOULD BE TAKEN BEFORE METER & RPZ.
4. PROVIDE LAVATORIES WITH THERMOSTATIC MIXING VALVES (TMV-1) LIMIT TEMPERATURE TO 110 DEG F. ALSO PROVIDE BALANCING VALVE ON HWR LINE LESS THAN 2' AWAY FROM LAVATORY.
5. PROVIDE NEW GAS WATER HEATER (WH-1 & 2) WITH EXPANSION TANK (ET-1). REFER SHEET P-1 FOR INSTALLATION DETAILS. MOUNT WATER HEATER ABOVE WASHER HEIGHT & BELOW FALSE CEILING. ENSURE THAT THERE IS 30" CLEARANCE IN FRONT FOR SERVICING.
6. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE 1/2 " CW TO HUMIDIFIER HU-1(N).

GENERAL NOTES

1. CW/HW/HWR PIPING TO BE PROVIDED WITH INSULATION AS PER 2023 FLORIDA ENERGY CONSERVATION CODE (8TH EDITION) (REFER SHEET P-1).
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. PROVIDE ACCESS PANELS FOR SHUT-OFF VALVES AS REQUIRED.
4. REFER RISER DIAGRAM FOR ALL PIPE SIZES.
5. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
6. WATER HEATER DRAIN SPILLS TO THE FLOOR DRAIN.
7. PROVIDE WATER-HAMMER ARRESTOR WHERE QUICK-CLOSING VALVES ARE USED.

WATER HEATER SCHEDULE

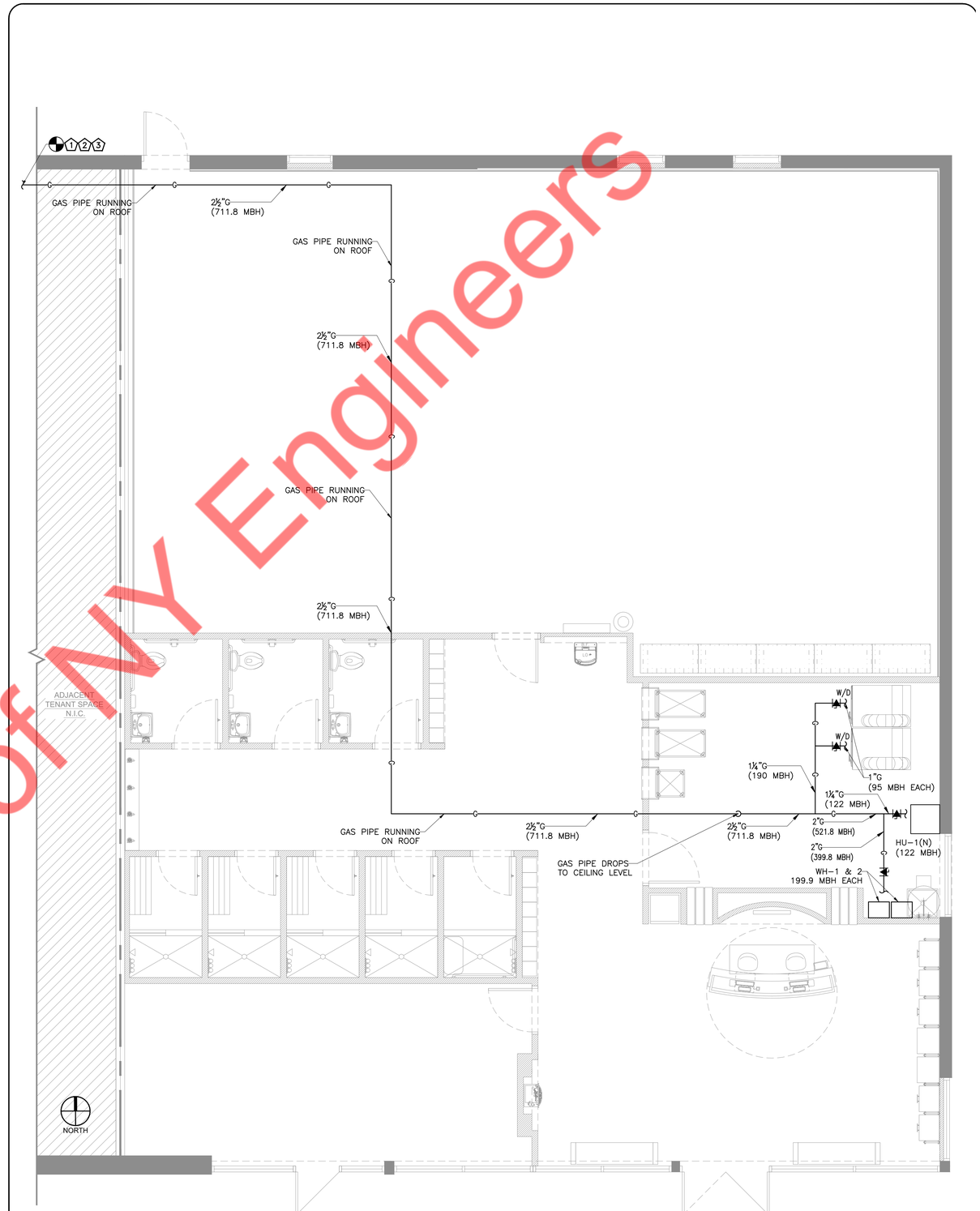
MANUFACTURER	NAVIEN
MODEL	NPE-240A2
EQUIPMENT TAG	WH-1 & 2
STATUS	NEW
QUANTITY	2
CAPACITY	TANKLESS
FUEL	GAS
BTU/HR	199,900 (EACH)
TOTAL FLOW RATE	12.00 GPM*
UNIFORM ENERGY FACTOR	0.95
AIR INTAKE / EXHAUSTVENT	2"Ø / 2"Ø
VOLTAGE	120/1/60
AMPERAGE	4
WEIGHT (EMPTY)	77 LBS.

NOTES:
1. *65°F TEMPERATURE RISE.
2. INSTALL NEW EXPANSION TANK (ET-1) AMTROL MODEL THERM-X-TROL ST-5C-DD AS PER LOCAL CODE REQUIREMENTS.

THERMOSTATIC MIXING VALVE SCHEDULE

MANUFACTURER & MODEL	WATTS USG-M-M2 (ASSE 1070)
EQUIPMENT TAG	TMV-1
PIPE SIZE	1/2"
FLOW RANGE	2.25 GPM
TEMP RANGE	120-180 DEG F
MATERIAL	BRASS

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



GAS KEYED NOTES

1. EXTEND AND CONNECT NEW 2½" GAS LINE TO NEW GAS METER. CONTRACTOR TO FIELD VERIFY SIZE, PRESSURE AND LOCATION OF GAS METER AND SERVICE WITH LANDLORD / UTILITY COMPANY.
2. CONTRACTOR TO FIELD VERIFY AVAILABLE PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED FOR ALL MECHANICAL EQUIPMENTS AND GAS FIRED WATER HEATERS. PROVIDE PRESSURE REGULATOR IF REQUIRED.
3. NEW GAS METER OF MINIMUM 712 MBH CAPACITY AND GAS LINE WITH ASSOCIATED ACCESSORIES TO BE PROVIDED BY LANDLORD. CONTRACTOR TO COORDINATE WITH LANDLORD FOR THE GAS METER LOCATION, REQUIRED CAPACITY OF GAS METER AND GAS PRESSURE.

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

WATER KEYED NOTES

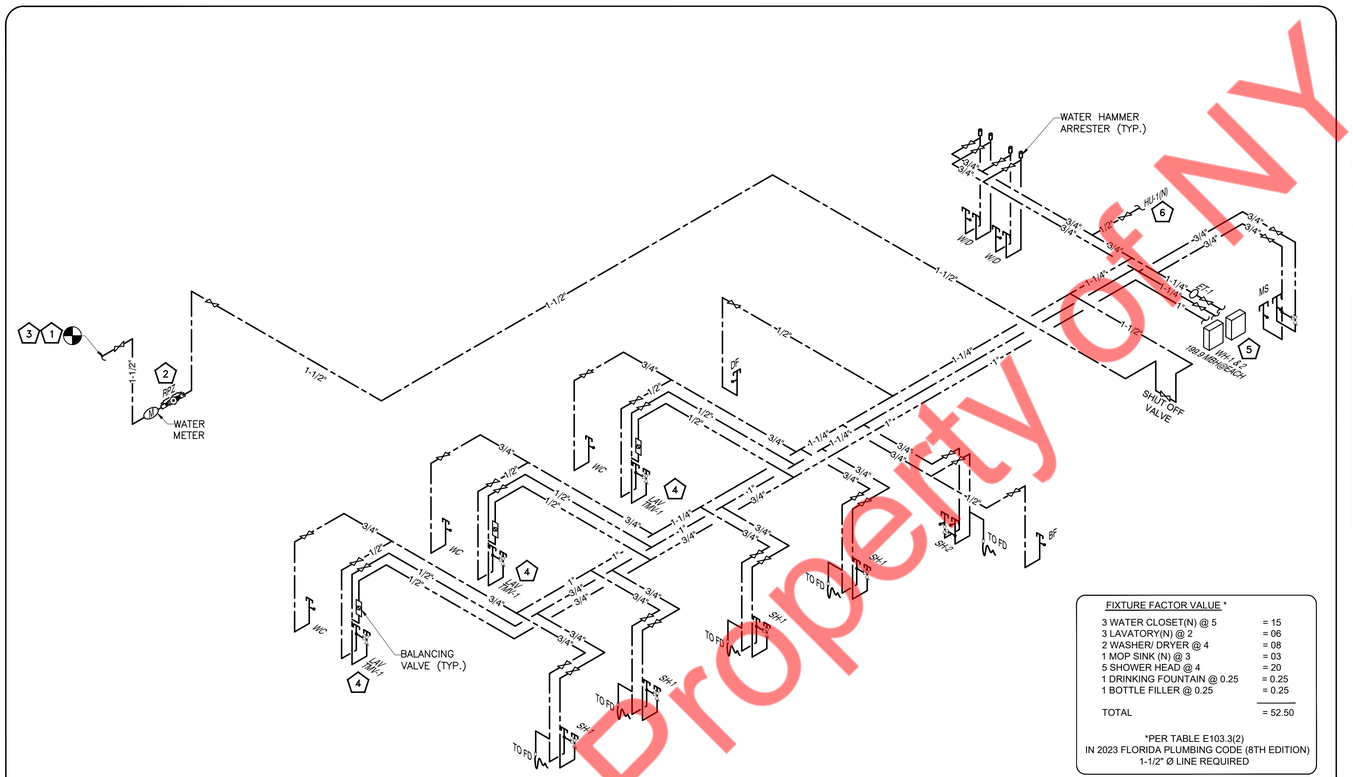
1. CONNECT NEW 1-1/2" COLD WATER LINE TO EXISTING COLD WATER LINE ABOVE CEILING. CONTRACTOR TO VERIFY EXACT LOCATION, SIZE CONNECTION POINT IN FIELD.
2. COORDINATE REQUIREMENT OF WATER METER & RPZ BACKFLOW PREVENTER WITH LANDLORD.
3. NO TAP OFF SHOULD BE TAKEN BEFORE METER & RPZ.
4. PROVIDE LAVATORIES WITH THERMOSTATIC MIXING VALVES (TMV-1). LIMIT TEMPERATURE TO 110 DEG F. ALSO PROVIDE BALANCING VALVE ON HWR LINE LESS THAN 2' AWAY FROM LAVATORY.
5. PROVIDE NEW GAS WATER HEATER (WH-1 & 2) WITH EXPANSION TANK (ET-1). REFER SHEET P-1 FOR INSTALLATION DETAILS. MOUNT WATER HEATER ABOVE WASHER HEIGHT & BELOW FALSE CEILING. ENSURE THAT THERE IS 30" CLEARANCE IN FRONT FOR SERVICING.
6. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE 1/2 " CW TO HUMIDIFIER (HU-1).

SANITARY KEYED NOTES

1. CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND INVERT OF EXISTING SANITARY WASTE LINE.
2. ROUTE INDIRECT WASTE FROM WASHER/DRYER MACHINE (W/D) TO TRENCH DRAIN. REFER DETAIL ABOVE FOR TRENCH DRAIN SPECS AND INSTALLATION.
3. ROUTE 3/4" CONDENSATE WASTE LINE FROM HUMIDIFIER UNIT (HU-1) IN CEILING TO TRENCH DRAIN.
4. ROUTE INDIRECT WASTE FROM WATER HEATERS (WH-1) & (WH-2) TO MOP SINK. WITH APPROVED AIR GAP.
5. EXTEND AND CONNECT NEW 3" VENT PIPING TO EXISTING VTR. CONTRACTOR TO FIELD VERIFY SIZE, LOCATION OF EXISTING VTR.

GAS KEYED NOTES

1. EXTEND AND CONNECT NEW 2½" GAS LINE TO NEW GAS METER. CONTRACTOR TO FIELD VERIFY SIZE, PRESSURE AND LOCATION OF GAS METER AND SERVICE WITH LANDLORD / UTILITY COMPANY.
2. CONTRACTOR TO FIELD VERIFY AVAILABLE PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED FOR ALL MECHANICAL EQUIPMENTS AND GAS FIRED WATER HEATERS. PROVIDE PRESSURE REGULATOR IF REQUIRED.
3. NEW GAS METER OF MINIMUM 712 MBH CAPACITY AND GAS LINE WITH ASSOCIATED ACCESSORIES TO BE PROVIDED BY LANDLORD. CONTRACTOR TO COORDINATE WITH LANDLORD FOR THE GAS METER LOCATION, REQUIRED CAPACITY OF GAS METER AND GAS PRESSURE.



FIXTURE FACTOR VALUE *

3 WATER CLOSET(N) @ 5	= 15
3 LAVATORY(N) @ 2	= 06
2 WASHER/ DRYER @ 4	= 08
1 MOP SINK (N) @ 3	= 03
5 SHOWER HEAD @ 4	= 20
1 DRINKING FOUNTAIN @ 0.25	= 0.25
1 BOTTLE FILLER @ 0.25	= 0.25
TOTAL	= 52.50

*PER TABLE E103.3(2)
IN 2023 FLORIDA PLUMBING CODE (8TH EDITION)
1-1/2" Ø LINE REQUIRED

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

GAS PIPE SIZING PER TABLE 402.4(2) 2023 FLORIDA BUILDING CODE, FUEL GAS, 8TH EDITION

EQUIVALENT LENGTH OF PIPE = 190 + FITTINGS (+40%) = 266 FEET

NATURAL GAS PIPING SYSTEM

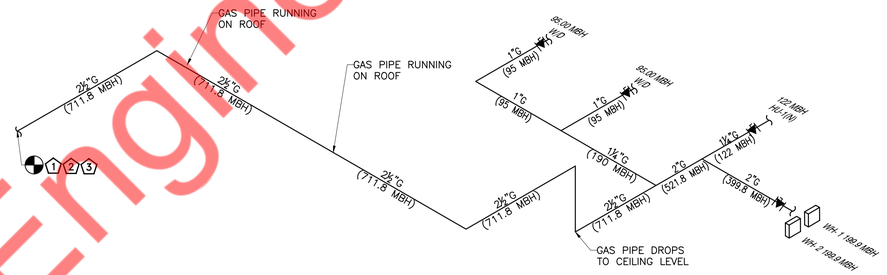
PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE GAS EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE ALL UNIONS, SHUT-OFF VALVES AND DIRT LEGS REQUIRED BY NFPA-54 AND GOVERNING LOCAL CODES AND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

NOTES:

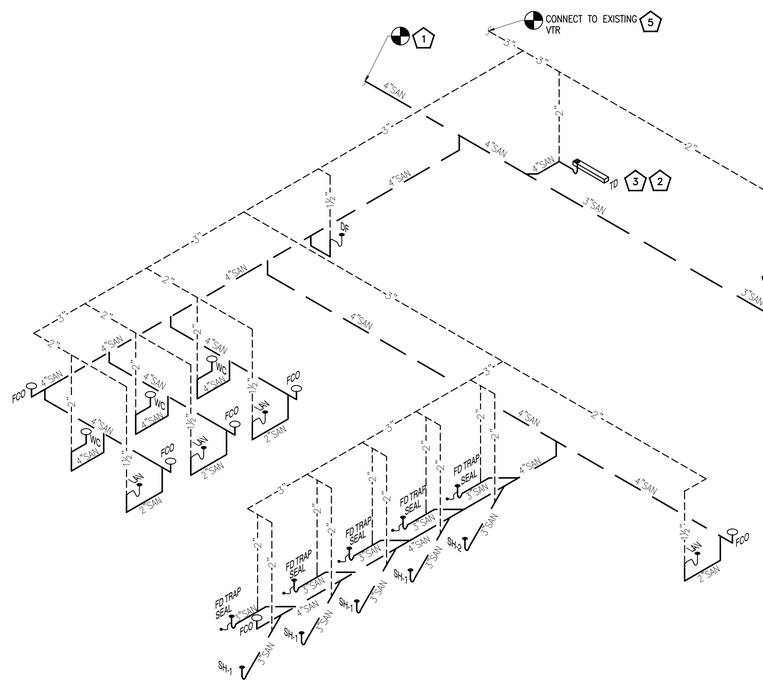
1. GAS PIPING TO BE SCHEDULE 40 STEEL PIPE W/125 CAST IRON SCREWED FITTINGS.
2. GAS SYSTEM TO BE INSTALLED BY QUALIFIED LICENSED CONTRACTOR.
3. VERIFY ALL EQUIPMENT BTU'S PRIOR TO INSTALLATION. ADJUST PIPE SIZE ACCORDING TABLE 402.4(2) 2023 FLORIDA BUILDING CODE, FUEL GAS, 8TH EDITION

GAS SCHEDULE

SR. NO.	DESCRIPTION	QTY	MANUFACTURER	MODEL	SIZE	MBH
01	HU-1(N)	01	DRISTEEM	GTS LX-100	1¼"	122.000
02	WH-1	01	NAVIEN	NPE-240A2	1¼"	199.900
03	WH-2	01	NAVIEN	NPE-240A2	1¼"	199.900
04	W/D	02	UNIMAC	UST050N	1¼"	190.000
				TOTAL LOAD		711.800



GAS RISER | SCALE N.T.S. | 3



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