SCOPE OF WORK

REUSE ONE EXISTING 1.5 TON AND ONE EXISTING 2.0 TON ELECTRIC HEAT SPLIT SYSTEM AND PROVIDE ONE NEW 4.0 TON HEAT PUMP SPLIT SYSTEM. PROVIDE NEW DUCTWORK AND PROVIDE NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEMS.

PROVIDE ONE TOILET EXHAUST FAN AND ONE OUTSIDE AIR FAN AS PER SCHEDULE.

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

MECHANICAL PLAN NOTES

A. PROVIDE A NEW 4.0 TON HEAT PUMP SPLIT SYSTEM, RELOCATE THE EXISTING SPLIT UNITS AND PROVIDE NEW DUCTWORK AND NECESSARY ACCESSORIES FOR COMPLETE HVAC SYSTEM. PROVIDE FLEXIBLE CONNECTORS ON SUPPLY AIR DUCT CONNECTIONS. PROVIDE DUCTWORK AND AIR DISTRIBUTION DEVICES AS INDICATED ON THE PLAN. REFER TO SPLIT SYSTEM SCHEDULE FOR ADDITIONAL REQUIREMENTS.

B. FOR SYSTEM OVER 2,000 CFM CHECK FOR DUCT MOUNTED AIR SMOKE DETECTORS AND THAT MEET THE REQUIREMENTS OF 2023 FMC 8th EDITION SEC. 606.2.1, INTERLOCKED TO SHUTDOWN AIR HANDLING 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. SMOKE DETECTOR SHALL MEET UL268A

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

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

E. ALL INDOOR DUCT AND PLENUM INSULATION SCHEDULE;
1. CONCEALED, RECTANGULAR, ROUND AND FLAT-OVAL, SUPPLY-RETURN, OUTDOOR-AND EXHAUST-AIR DUCT AND AIR PLENUM INSULATION:
2. FLEXIBLE ELASTOMERIC, MINERAL-FIBER BLANKET, MINERAL-FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:

	SA PLENUM	RA PLENUM
UNCONDITIONED SPACES:	R-4.2	R-4.2
UNVENTED ATTIC ABOVE INSULATED CEILING:	R-6	R-4.2
EXTERIOR OF BUILDING:	R-6	R-4.2

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

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

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

J. 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.

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.

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

FLORIDA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2023 FBC 8th EDITION AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

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

2. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2023 FMC 8th EDITION:
   A. VENTILATION SYSTEM BALANCING - 2023 FMC 8th EDITION(2021 IMC) - 403.3

3. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. STANDARDS OF HEATING- 2023 FMC 8th EDITION - 309.1
   B. DUCT CONSTRUCTION AND INSTALLATION- 2023 FMC 8th EDITION - 603
   C. AIR INTAKES, EXHAUSTS AND RELIEF - 2023 FMC 8th EDITION - 401.5
   D. AIR FILTERS - 2023 FMC 8th EDITION - 605
   E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - 2023 FMC 8th EDITION - 606

4. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.

5. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2023 FMC 8th EDITION 401.

6. 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 FMC 8th EDITION 403.3

7. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.

8. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

9. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.

10. SMOKE DETECTOR SHALL MEET UL268A.

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 TO SUBMIT THE AIR BALANCE REPORT TO INSPECTOR OF RESPECTIVE BUILDING DEPARTMENT PRIOR TO FINAL INSPECTION.

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

THERMOSTATIC CONTROLS

A. C403.2.4.1 THERMOSTATIC CONTROLS
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

EXCEPTION: INDEPENDENT PERIMETER SYSTEMS THAT ARE DESIGNED TO OFFSET ONLY BUILDING ENVELOPE HEAT LOSSES, GAINS OR BOTH SERVING ONE OR MORE PERIMETER ZONES ALSO SERVED BY AN INTERIOR SYSTEM PROVIDED THAT BOTH OF THE FOLLOWING CONDITIONS ARE MET:

1. THE PERIMETER SYSTEM INCLUDES NOT FEWER THAN ONE THERMOSTATIC CONTROL ZONE FOR EACH BUILDING EXPOSURE HAVING EXTERIOR WALLS FACING ONLY ONE ORIENTATION (WITHIN ± 45 DEGREES) (0.8 RAD) FOR MORE THAN 50 CONTIGUOUS FEET (15 240 MM).
2. THE PERIMETER SYSTEM HEATING AND COOLING SUPPLY IS CONTROLLED BY THERMOSTATS LOCATED WITHIN THE ZONES SERVED BY THE SYSTEM.

B. C403.2.4.1.1 HEAT PUMP SUPPLEMENTARY HEAT.
HEAT PUMPS HAVING SUPPLEMENTARY ELECTRIC RESISTANCE HEAT SHALL HAVE CONTROLS THAT LIMIT SUPPLEMENTAL HEAT OPERATION TO ONLY THOSE TIMES WHEN:

1. THE VAPOR COMPRESSION CYCLE CANNOT PROVIDE THE NECESSARY HEATING ENERGY TO SATISFY THE THERMOSTAT SETTING,
2. THE HEAT PUMP IS OPERATING IN DEFROST MODE,
3. THE VAPOR COMPRESSION CYCLE MALFUNCTIONS, OR
4. THE THERMOSTAT MALFUNCTIONS.

C. C403.2.4.1.2 DEADBAND
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

EXCEPTIONS:
1. THERMOSTATS REQUIRING MANUAL CHANGEOVER BETWEEN HEATING AND COOLING MODES.
2. OCCUPANCIES OR APPLICATIONS REQUIRING PRECISION IN INDOOR TEMPERATURE CONTROL AS APPROVED BY THE CODE OFFICIAL.

D. C403.2.4.1.3 SETPOINT OVERLAP RESTRICTION
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT, DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.2.4.1.2.

E. C403.2.4.2 OFF-HOUR CONTROLS
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

EXCEPTIONS:
1. ZONES THAT WILL BE OPERATED CONTINUOUSLY.
2. ZONES WITH A FULL HVAC LOAD DEMAND NOT EXCEEDING 6,800 BTU/H (2 KW) AND HAVING A READILY ACCESSIBLE MANUAL SHUTOFF SWITCH.

F. C403.2.4.2.1 THERMOSTATIC SETBACK CAPABILITIES.
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

G. C403.2.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN CAPABILITIES
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR AT LEAST 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CAPABLE OF BEING ADJUSTED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

H. C403.2.4.2.3 AUTOMATIC AND OPTIMUM START CAPABILITIES (MANDATORY)
AUTOMATIC START CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY.

INDIVIDUAL HEATING AND COOLING SYSTEMS WITH SETBACK CONTROLS AND DIRECT DIGITAL CONTROL SHALL HAVE OPTIMUM START CONTROLS. THE CONTROL ALGORITHM SHALL, AS A MINIMUM, BE A FUNCTION OF THE DIFFERENCE BETWEEN SPACE TEMPERATURE AND OCCUPIED SET POINT, THE OUTDOOR TEMPERATURE, AND THE AMOUNT OF TIME PRIOR TO SCHEDULED OCCUPANCY. MASS RADIANT FLOOR SLAB SYSTEMS SHALL INCORPORATE FLOOR TEMPERATURE INTO THE OPTIMUM START ALGORITHM.

SPLIT SYSTEM SCHEDULE

	UNIT TAG	FC-1(E)	FC-4(E)	AHU-1(N)
AIR HANDLER DATA	UNIT TYPE	CONDENSING UNIT	CONDENSING UNIT	HEAT PUMP
	AREA SERVED	REFER PLAN	REFER PLAN	REFER PLAN
	SUPPLY AIR (CFM)	600	800	1600
	OUTSIDE AIR (CFM)	150	200	240
	STATIC PRESS. (E.S.P INCH OF W.C.)	S.A.E	S.A.E	0.4
	MANUFACTURER	S.A.E	S.A.E	RHEEM
	MODEL NO.	S.A.E	S.A.E	RH2TZ4821ST
	WEIGHT, LBS	S.A.E	S.A.E	139
	VOLTS/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60
	ELECTRIC HEATER	5kW (V.I.F)	5kW (V.I.F)	-
	MCA (A)	18.0 (V.I.F)	31.5 (V.I.F)	5
	MOCP (A)	30.0 (V.I.F)	40.0 (V.I.F)	15
CONDENSING UNIT DATA	UNIT TAG	CU-1 (E)	CU-4 (E)	ACCU-1(N)
	AIR HANDLER SERVED	FC-1(E)	FC-4(E)	AHU-1(N)
	CAPACITY	1.5 TR	2.0 TR	4.0 TR
	REFRIGERANT	S.A.E	S.A.E	R410A
	TOT. COOLING CAP. (MBH)	S.A.E	S.A.E	45
	COOLING SENS. CAP. (MBH)	S.A.E	S.A.E	34.9
	TOT. HEATING CAP. (MBH) @47°F	-	-	45.5
	COMPRESSOR RLA	S.A.E	S.A.E	22
	OUTDOOR FAN FLA	S.A.E	S.A.E	1
	VOLTS/PH/HZ	208-230/1/60	208-230/1/60	208-230/1/60
	M.C.A. / MAX. CKT. BRKR. AMPS	12.0 /15.0 (V.I.F)	16.8 /25.0 (V.I.F)	29.0 /50.0
	MANUFACTURER	S.A.E	S.A.E	RHEEM
	MODEL	S.A.E	S.A.E	RP14AZ48AJ2NA
	SEER2	S.A.E	S.A.E	14.3
	HSPF2	S.A.E	S.A.E	7.5
	WEIGHT, LBS	S.A.E	S.A.E	245

HEAT PUMP SPLIT SYSTEM NOTES:-

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

DIFFUSER SCHEDULE

MANUFACTURER	TITUS	TITUS	TITUS	TITUS
DESIGNATION	A	B	R	R1
USE	SUPPLY	SUPPLY	RETURN	RETURN
MODEL	TMS	TMS	56FL	56FL
MOUNTING	CEILING	CEILING	CEILING	WALL
LOCATION	ANY	ANY	ANY	ANY
FACE SIZE	24" X 24"	12" X 12"	24" X 24"	24" X 14"
NECK SIZE	REFER TABLE A	REFER TABLE A	AS SHOWN	AS SHOWN
FRAME TYPE	FLANGED	FLANGED	FLANGED	FLANGED
NOISE CRITERIA	<30	<30	<30	<30
ACCESSORIES	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER	VOLUME DAMPER

NOTES:
1. MAX. NC LEVEL 30 OR LESS.
2. MOUNTING FRAME TYPE SHALL BE COORDINATED WITH CEILING/ WALL CONSTRUCTION.
3. CO-ORDINATE WITH ARCHITECT/OWNER FOR FINAL MOUNTING, FRAME TYPE,PAINT AND FINISH.
4. PROVIDE INSULATED BACKS ON ALL DIFFUSERS.

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

OCCUPANCY CALCULATION

RECEPTION	218 SQ. FT.	2 PEOPLE
STUDIO	1206 SQ. FT.	23 PEOPLE
	TOTAL	25 PEOPLE

REFER TO THE OCCUPANT LOAD CALCULATIONS ON SHEET CS-1 FOR ARCHITECTURAL OCCUPANCY CALCULATION.

VENTILATION REQUIREMENTS PER 2023 FLORIDA MECHANICAL CODE,TABLE 403.3.1.1

RECEPTION	218 SQ. FT. X 0.06 CFM/SQ. FT. =	14 CFM
	2 PEOPLE. X 5 CFM/PEOPLE. =	10 CFM
STUDIO	1206 SQ. FT. X 0.06 CFM/SQ. FT. =	73 CFM
	22 PEOPLE. X 20 CFM/PEOPLE. =	460 CFM
STORAGE	65 SQ. FT. X 0.12 CFM/SQ. FT. =	8 CFM
OUTSIDE AIR REQUIRED		565 CFM
EXHAUST AIR		
UNISEX RESTROOM	70 CFM PER FIXTURE	70 CFM
AIR BALANCE		
O/A PROVIDED THROUGH OAF-1(N)		+590 CFM
EF-1(N)		-70 CFM
BUILDING PRESSURE		+520 CFM

FAN SCHEDULE

TAG	EF-1(N)	OAF-1(N)
STATUS	NEW	NEW
QUANTITY	1	1
MANUFACTURER	GREENHECK	GREENHECK
MODEL	SP-A200	SQ-7-M1-VG
CFM	70 CFM AT 0.5" W.G. ESP	590 @ 1.0 (ESP IN W.C.)
FLA (AMPS)	0.46	6.6
ACCESSORIES	BDD	MD
WEIGHT (LBS)	32	38
VOLT / PH / HZ	115/1/60	115/1/60

NOTES :
1. PROVIDE DISCONNECT SWITCH.
2. INTERCONNECT OAF-1(N) WITH FC-1(E), FC-4(E) AND AHU-1(N)
3. PROVIDE BACK DRAFT DAMPER.
4. PROVIDE SLOPED FILTER BOX 2" PLEATED (MERV 8/13) FILTERS FOR OAF-1(N)
5. PROVIDE ACCESS DOOR IN COORDINATION WITH ARCHITECT/OWNER.
6. INTERCONNECT EF-1(N) WITH LIGHT IN ROOM.

MECHANICAL SYMBOLS

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

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

HVAC PIPING INSULATION NOTES

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

MINIMUM REFRIGERANT PIPE INSULATION THICKNESS (IN.)

FLUID OPERATING TEMP. RANGE & USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (IN.)				
	CONDUCTIVITY BTU.IN./(H.FT².°F)	MEAN RATING TEMP., °F	<1	1 TO<1-1/2	1-1/2 TO <4	4 TO <8	≥8
105 — 140	0.21 — 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
< 40	0.20 — 0.26	50	0.5	1.0	1.0	1.0	1.5

NY ENGINEERS

PROJECT

JETSET PILATES

REVISIONS DATES:

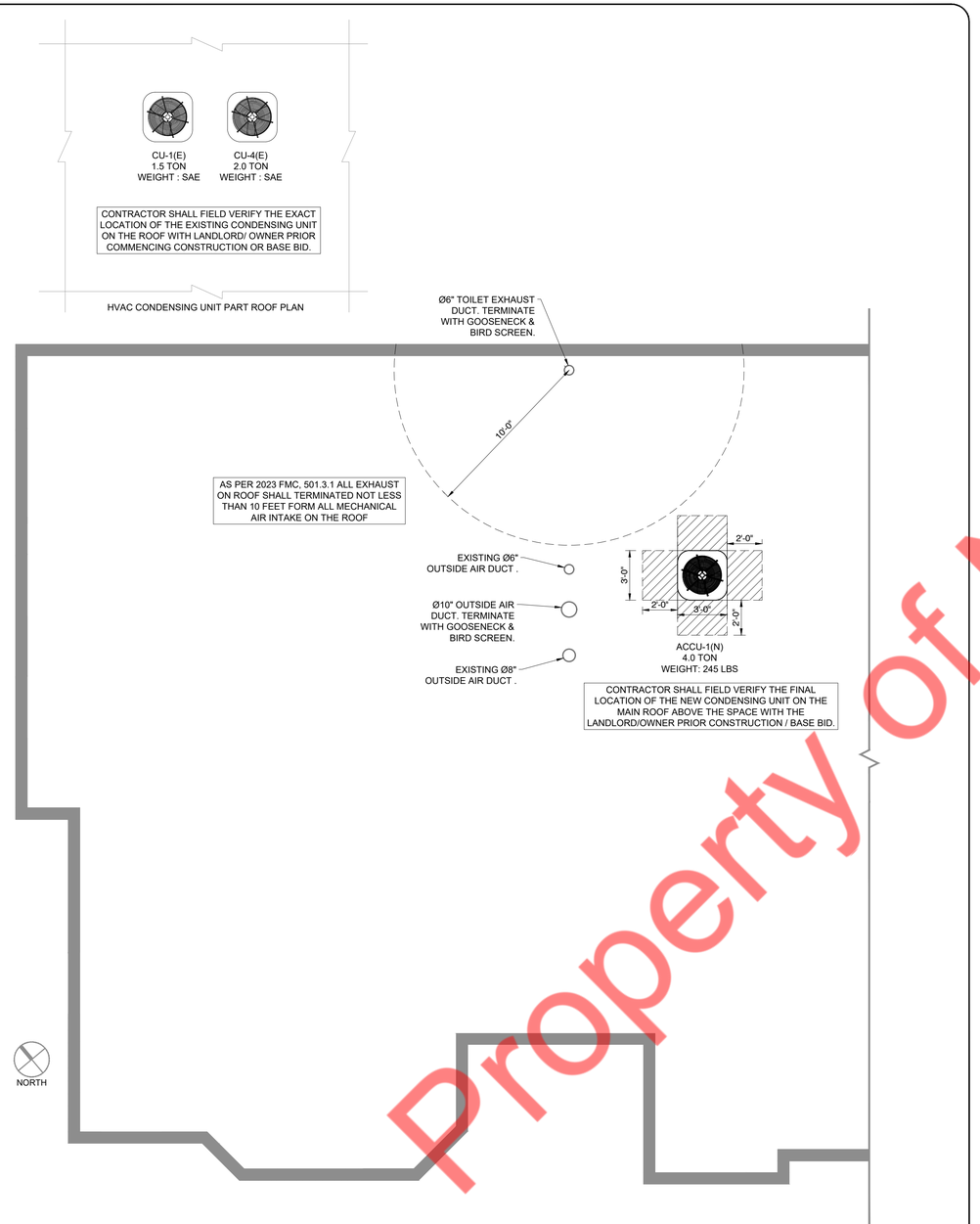
PROFESSIONAL SEAL

NOT FOR PERMIT OR BID
NOT FOR CONSTRUCTION

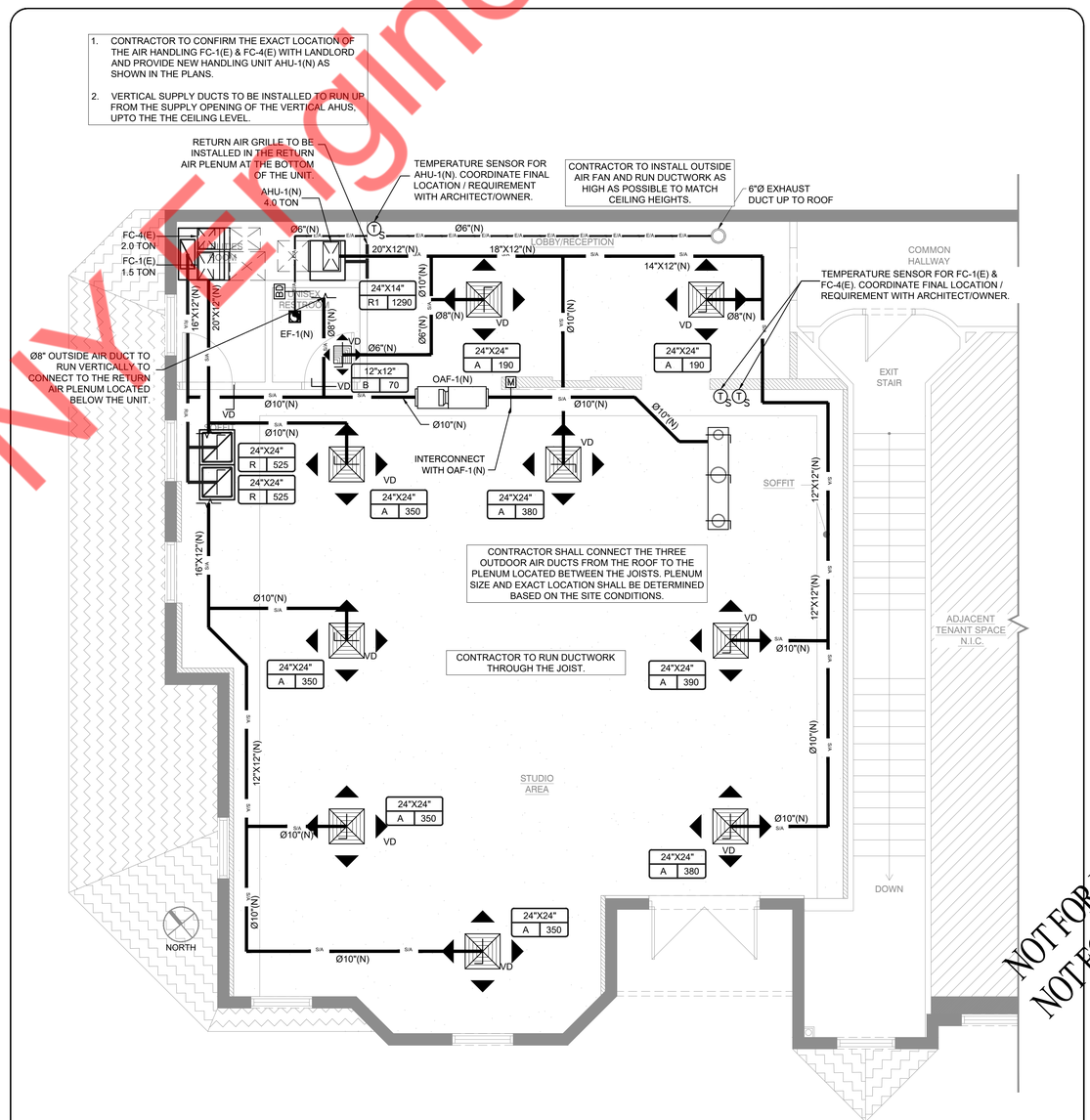
ISSUE DATE:
PROJECT #:
DRAWN BY: NYE
CHECKED BY: NYE

HVAC NOTES AND SCHEDULES

M-1



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



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

NY ENGINEERS

PROJECT

JETSET PILATES

REVISIONS DATES:

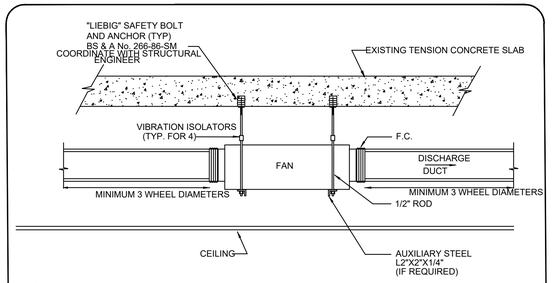
PROFESSIONAL SEAL

NOT FOR PERMIT OR BID
NOT FOR CONSTRUCTION

ISSUE DATE:
PROJECT #:
DRAWN BY: NYE
CHECKED BY: NYE

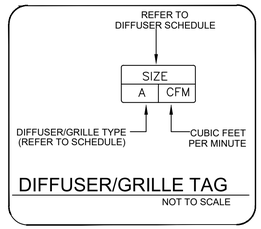
HVAC
FLOOR & ROOF
PLANS

M-2

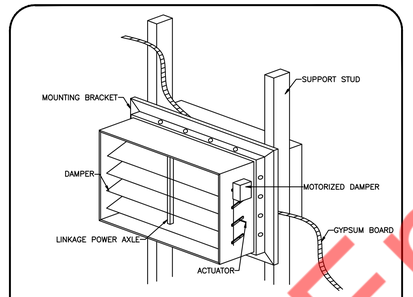


NOTE:
1. DUCT LENGTH TO BE MINIMUM THREE WHEEL DIAMETER ON DISCHARGE AND INLET.

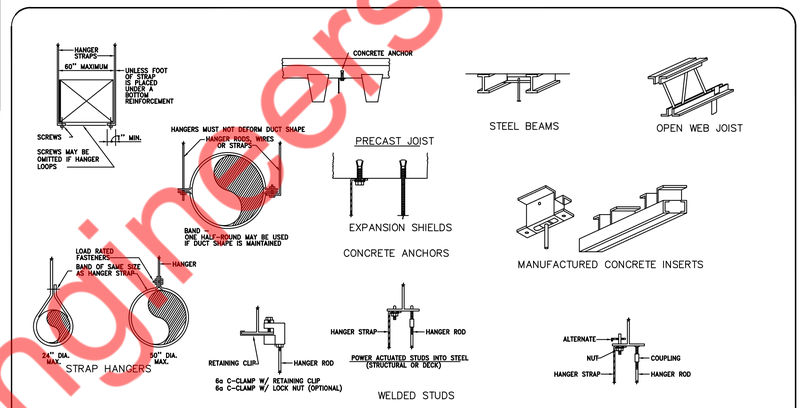
INLINE FAN SUPPORT DETAILS
NOT TO SCALE



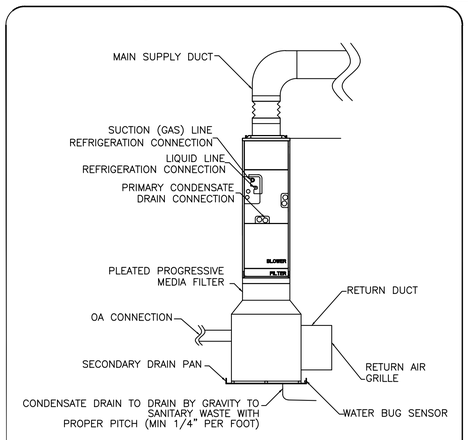
DIFFUSER/GRILLE TAG
NOT TO SCALE



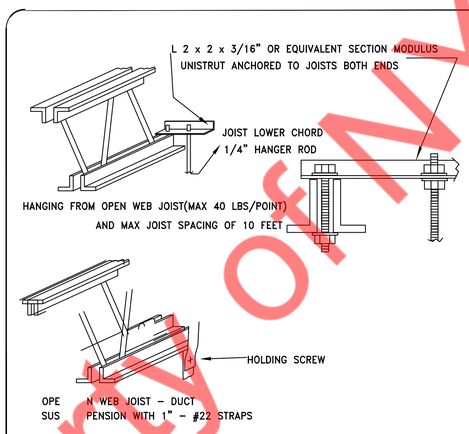
MOTORIZED DAMPER DETAIL
NOT TO SCALE



UPPER & LOWER ATTACHMENTS & DEVICES
NOT TO SCALE

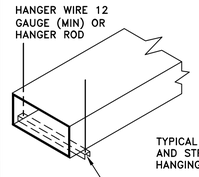


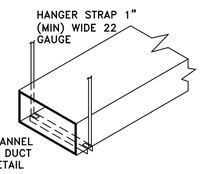
TYPICAL VERTICAL AIR HANDLER DETAIL
NOT TO SCALE



DUCT MOUNTING DETAIL
NOT TO SCALE

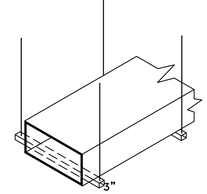
CHANNEL SELECTION		
DUCT WIDTH MIN.	CHANNEL GUAGE MIN.	CHANNEL PROFILE
LESS THAN 18"	22 3"x 2"	
LESS THAN 30"	18 3"x 2"	





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

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



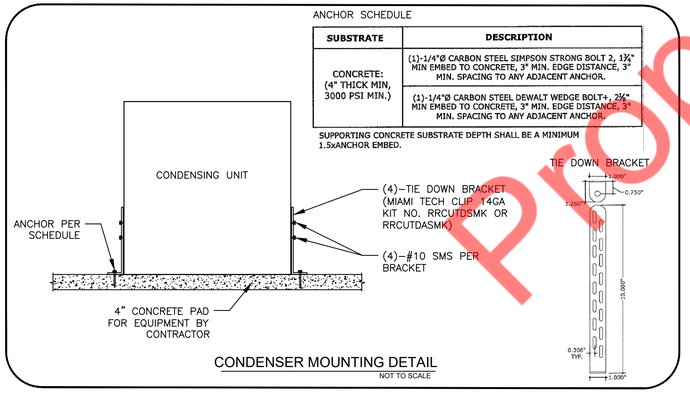
HANGER SPACING AND EXTENSION
3" WIDE CHANNELS

DUCT SUPPORTS
NOT TO SCALE

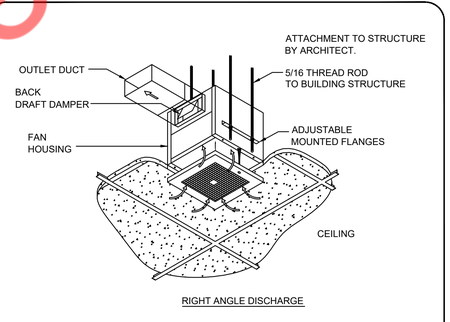
ANCHOR SCHEDULE

SUBSTRATE	DESCRIPTION
CONCRETE: (4" THICK MIN, 3000 PSI MIN.)	(1)-1/4"Ø CARBON STEEL SIMPSON STRONG BOLT 2, 1¾" MIN EMBED TO CONCRETE, 3" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.
	(1)-1/4"Ø CARBON STEEL DEWALT WEDGE BOLT+, 2¾" MIN EMBED TO CONCRETE, 3" MIN. EDGE DISTANCE, 3" MIN. SPACING TO ANY ADJACENT ANCHOR.

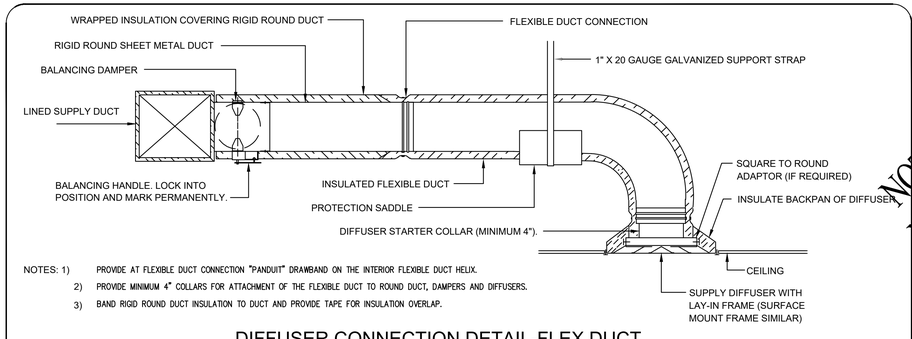
SUPPORTING CONCRETE SUBSTRATE DEPTH SHALL BE A MINIMUM 1.5xANCHOR EMBED.



CONDENSER MOUNTING DETAIL
NOT TO SCALE



CEILING EXHAUST FAN 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

NY ENGINEERS

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CHECKED BY: NYE

MECHANICAL DETAILS

M-3

System Checksums

By Trial

AHU — **Single Zone**

COOLING COIL PEAK

Peaked at Time: Mo/Hr: 8 / 16
Outside Air: OADB/WB/HR: 93 / 77 / 119

	Space Sens. + Lat. Btu/h	Plenum Sens. + Lat Btu/h	Net Total Btu/h	Percent Of Total (%)
Envelope Loads				
Skylite Solar	0	0	0	0
Skylite Cond	0	0	0	0
Roof Cond	0	5,919	5,919	8
Glass Solar	3,725	0	3,725	5
Glass/Door Cond	1,725	0	1,725	2
Wall Cond	6,703	2,398	9,101	12
Partition/Door	0		0	0
Floor	0		0	0
Adjacent Floor	0.00	0.00	0.00	0.00
Infiltration	0		0	0
Sub Total ==>	12,152	8,316	20,469	27
Internal Loads				
Lights	6,055	1,514	7,569	10
People	11,250	0	11,250	15
Misc	5,980	0	5,980	8
Sub Total ==>	23,285	1,514	24,799	32
Ceiling Load	2,038	-2,038	0	0
Ventilation Load	0	0	33,728	44
Adj Air Trans Heat	0		0	0
Dehumid. Ov Sizing			0	0
Ov/Undr Sizing	0		0	0
Exhaust Heat		-2,669	-2,669	-3
Sup. Fan Heat			0	0
Ret. Fan Heat		0	0	0
Duct Heat Pkup		0	0	0
Underflr Sup Ht Pkup			0	0
Supply Air Leakage		0	0	0
Grand Total ==>	37,475	5,123	76,326	100.00

CLG SPACE PEAK

Mo/Hr: Sum of
OADB: Peaks

	Space Sensible Btu/h	Percent Of Total (%)
Envelope Loads		
Skylite Solar	0	0
Skylite Cond	0	0
Roof Cond	0	0
Glass Solar	5,662	17
Glass/Door Cond	1,047	3
Wall Cond	7,028	21
Partition/Door	0	0
Floor	0.00	0
Adjacent Floor	0.00	0.00
Infiltration	0	0
Sub Total ==>	13,737	41
Internal Loads		
Lights	6,055	18
People	6,250	18
Misc	5,980	18
Sub Total ==>	18,285	54
Ceiling Load	1,819	5
Ventilation Load	0	0
Adj Air Trans Heat	0	0
Ov/Undr Sizing		
Exhaust Heat	0	0
OA Preheat Diff.		
RA Preheat Diff.		
Additional Reheat		
Underflr Sup Ht Pkup		
Supply Air Leakage		
Grand Total ==>	33,841	100.00

HEATING COIL PEAK

Mo/Hr: Heating Design
OADB: 46

	Space Peak Space Sens Btu/h	Coil Peak Tot Sens Btu/h	Percent Of Total (%)
Envelope Loads			
Skylite Solar	0	0	0.00
Skylite Cond	0	0	0.00
Roof Cond	0	-1,851	6.30
Glass Solar	0	0	0.00
Glass/Door Cond	-2,355	-2,355	8.02
Wall Cond	-3,950	-5,404	18.40
Partition/Door	0	0	0.00
Floor	0	0	0.00
Adjacent Floor	0.00	0.00	0.00
Infiltration	-3,933	-3,933	13.39
Sub Total ==>	-10,238	-13,543	46.12
Internal Loads			
Lights	0	0	0.00
People	0	0	0.00
Misc	0	0	0.00
Sub Total ==>	0	0	0.00
Ceiling Load	-630	0	0.00
Ventilation Load	0	-16,837	57.34
Adj Air Trans Heat	0	0	0
Ov/Undr Sizing	0	0	0.00
Exhaust Heat		1,016	-3.46
OA Preheat Diff.		0	0.00
RA Preheat Diff.		0	0.00
Additional Reheat		0	0.00
Underflr Sup Ht Pkup		0	0.00
Supply Air Leakage		0	0.00
Grand Total ==>	-10,868	-29,364	100.00

TEMPERATURES

	Cooling	Heating
SADB	55.3	77.5
Ra Plenum	79.1	70.7
Return	79.1	70.7
Ret/OA	83.5	62.7
Fn MtrTD	0.0	0.0
Fn BldTD	0.0	0.0
Fn Frict	0.0	0.0

AIRFLOWS

	Cooling	Heating
Diffuser	1,775	1,775
Terminal	1,775	1,775
Main Fan	1,775	1,775
Sec Fan	0	0
Nom Vent	590	590
AHU Vent	590	590
Infil	0	138
MinStop/Rh	0	0
Return	1,775	1,911
Exhaust	590	726
Rm Exh	0	2
Auxiliary	0	0
Leakage Dwn	0	0
Leakage Ups	0	0

ENGINEERING CKS

	Cooling	Heating
% OA	33.2	33.2
cfm/ft²	1.12	1.12
cfm/ton	242.70	
ft²/ton	216.55	
Btu/hr·ft²	55.41	-23.17
No. People	25	

COOLING COIL SELECTION

	Total Capacity ton	Total Capacity MBh	Sens Cap. MBh	Coil Airflow cfm	Enter DB °F	Enter WB °F	Enter HR gr/lb	Leave DB °F	Leave WB °F	Leave HR gr/lb
Main Clg	7.3	87.8	56.4	1,775	83.5	68.7	81.7	55.3	53.0	56.3
Aux Clg	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Opt Vent	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7.3	87.8								

AREAS

	Gross Total	Glass ft²	Glass (%)
Floor	1,584		
Part	0		
Int Door	0		
ExFlr	0		
Roof	1,584	0	0
Wall	1,491	74	5
Ext Door	51	51	100

HEATING COIL SELECTION

	Capacity MBh	Coil Airflow cfm	Ent °F	Lvg °F
Main Htg	-36.7	1,775	62.7	77.5
Aux Htg	0.0	0	0.0	0.0
Preheat	0.0	0	0.0	0.0
Humidif	0.0	0	0.0	0.0
Opt Vent	0.0	0	0.0	0.0
Total	-36.7			

Project Name: JSP
Dataset Name: JSP - WESTON - FL - DNR.TRC

TRACE® 700 v6.3.4 calculated at 02:10 AM on 08/24/2024
Alternative - 1 System Checksums Report Page 1 of 1

SCOPE OF WORK

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

ELECTRICAL PLAN NOTES

1. ELECTRICAL CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET.
2. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT, NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING, OR PROCEEDING WITH WORK.
3. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED. CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND APPLICABLE SPECIFICATIONS. IF A PROBLEM IS ENCOUNTERED IN COMPLYING WITH THIS REQUIREMENT, CONTRACTOR SHALL NOTIFY THE OWNER OR HIS REPRESENTATIVE AS SOON AS POSSIBLE AFTER DISCOVERY OF THE PROBLEM AND SHALL NOT PROCEED WITH THAT PORTION OF THE WORK UNTIL OWNER HAS DIRECTED CORRECTIVE ACTION TO BE TAKEN.
4. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATIONS INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRIC CODE 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. ALL OUTDOOR EQUIPMENT SHALL BE WEATHERPROOF.
49. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
50. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER.
51. ABSOLUTELY NO FLEXIBLE CONDUIT IS PERMITTED IN DEMISING WALLS. FLEXIBLE CONDUIT IS PERMITTED FOR SHORT FINAL CONNECTIONS ONLY (6'-0" OR LESS).
52. EXPOSED CONDUIT SHALL BE INSTALLED IN STRAIGHT LINES, PARALLEL OR IN RIGHT ANGLES TO THE BUIDING STRUCTURE. DO NOT LOOP EXCESS FLEXIBLE CONDUIT IN CEILING SPACE OR WALL CAVITY. NO CONDUIT TO BE SUPPORTED FROM THE ROOF DECK.
53. CABLE TYPES AC AND NM CABLES ARE NOT ACCEPTABLE. TYPE MC CABLE, ELECTRIC METALLIC TUBING (EMT) AND RIGID GALVANIZED CONDUIT ARE PERMITTED.
54. ALL EQUIPMENT, DEVICES AND FIXTURES SHALL BE GROUNDED IN COMPLIANCE WITH NEC AND UL REQUIREMENTS.
55. ALL PANELS TO BE UL LABELED.
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. ALL ELECTRICAL PANELS TO BE MOUNTED ON PLYWOOD BACKER BOARD.
58. PANEL PHASE LOADS TO BE BALANCED WITHIN 10%.
59. ELECTRICAL PANELS MAY NOT BE RECESSED IN DEMISING PARTITIONS. SURFACEMOUNT OR FULL FUR OUT WALL TO ACHIEVE FLUSH FINAL APPEARANCE.
60. COORDINATE ALL CONCRETE TRENCHING/CORING TO ENSURE THAT ANY UNDERSLAB UTILITIES, ETC. ARE NOT DAMAGED DURING FLOOR CUT. ANY DAMAGE TO BEREPAIRED AT TENANT'S EXPENSE. PRIOR APPROVAL AND COORDINATION WITHPROPERTY MANAGEMENT IS REQUIRED FOR ALL CONCRETE CUTTING.

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
S_M	MOTOR SWITCH
J	JUNCTION BOX
	BATTERY BACK UP EXIT LIGHT
	BATTERY BACK UP EMERGENCY LIGHT
$	WALL SWITCH (SINGLE, DOUBLE,)
$OS	OCCUPANCY SENSOR WALL SWITCH
	DUPLEX RECEPTACLE
GFI	GFI DUPLEX RECEPTACLE
	230 VOLT RECEPTACLE
	QUADRUPLEX RECEPTACLE
	ELECTRICAL PANEL
TV	TELEVISION OUTLET
	COMMUNICATION DUPLEX DATA (ETHERNET) JACK (1 RUN) (RJ45)
	TELEPHONE/DATA OUTLET
	COMMUNICATION DUPLEX PHONE (RJ45)
RK	SMALL AUDIO RACK MOUNTED INSIDE CREDENZA(2-GANG ELECTRICAL BOX)
WC	WALL CONTROL WITH BLUETOOTH MODULE(2-GANG BOX WITH 2 1/8" EXTENSION RING)
S	SPEAKER
A	30A/240V NON FUSED DISCONNECT SWITCH
B	60A/240V NON FUSED DISCONNECT SWITCH
MD	MOTORIZED DAMPER

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 SOURCE HEAT PUMP=WSHP
AUTHORITY HAVING JURISDICTION= A.H.J.
BELOW COUNTER= BC
PUSH BUTTON= PB
UNDER CABINET= UC
VAPOR PROOF= VP
ELECTRICAL CONTRACTOR=E.C.
OUTSIDE AIR FAN=OAF

EXISTING CONTIDITONS NOTES

STOP AND READ

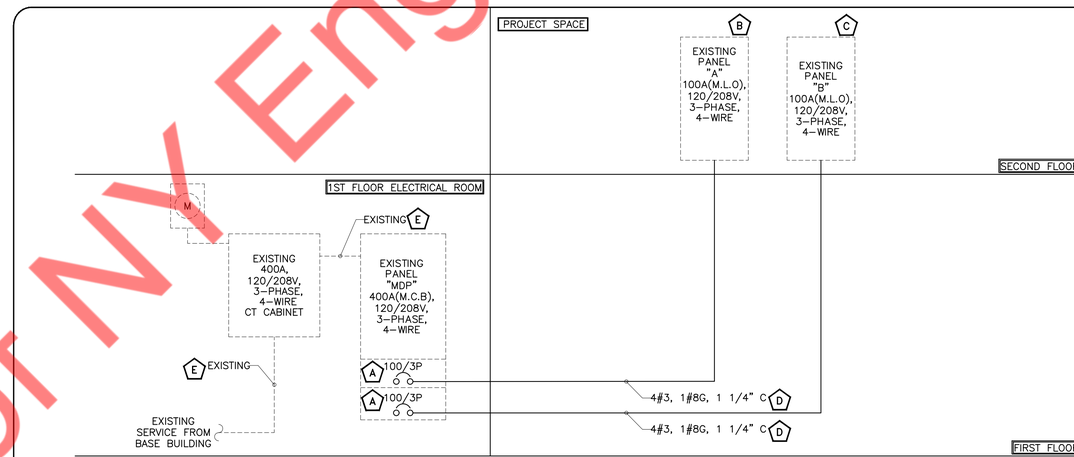
THE CONTRACTOR AND SUB-CONTRACTORS **SHALL NOT INITIATE ANY WORK UNTIL EXISTING FIELD CONDITIONS ARE PROPERLY VERIFIED**. THIS SHALL HOLD TRUE FOR FIRST GENERATION AND 2ND GENERATION SPACES. WHEN DEMOLITION IS REQUIRED, THAT WILL BE PERMITTED TO EXPOSE CONDITIONS. THESE VERIFICATIONS SHALL INCLUDE BUT 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.

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLT	LAMP TYPE	WATTAGES	MOUNTING
	A	4" DEEP REGRESS DOWNLIGHT	ALPHABET	NU4-RDDR-XTM09-20LM-30K-83-30	120	LED	19 WATTS	RECESSED
	B	4" DEEP REGRESS DOWNLIGHT	ALPHABET	NU4-RD-XTM19-20LM-30K-83-HE40	120	LED	19 WATTS	RECESSED
	C	DECORATIVE PENDENT	MOXY PENDANT	700-KL-SLED927	120	LED	4 WATT	PENDANT
	D	DECORATIVE WALL SCONCE	WAC LIGHTING	WS-85618	120	LED	15.5 WATT	WALL
	F	4' LED STRIP LIGHT	KEYSTONE TECHNOLOGIES	KT- MSLED28-4-840-VDIM-P	120	LED	28 WATT	RECESSED
	G	TAPE LIGHT	AMERICAN LIGHTING	HTL-RGBW-100	120	LED	4.4 WATTS/ FEET	RECESSED
	H	SIGN	T.B.D.	T.B.D.	120	LED	T.B.D.	RECESSED
	EM1	WALL MOUNTED EMERGENCY LIGHTS	COOPER LIGHTING	APELMINI	120	LED	0.33 WATTS	CEILING
	X2	EXIT/EMERGENCY COMBO SIGNS	T.B.D.	T.B.D.	120	LED	3 WATTS	WALL
OS	OS	CEILING OCCUPANCY SENSOR	LUTRON	LOS-CDT-2000	120	-	-	CEILING
$OS	OS	OCCUPANCY WALL SWITCH	LUTRON	MS-A102	120	-	-	WALL
$D	DS	DIMMER SWITCH WALL	LEVITON/EQUIVALENT	DSE06-001-10Z/EQUIVALENT	120	-	-	WALL

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.
4. E.C SHALL COORDINATE WITH LIGHT FIXTURE VENDOR FOR EXACT COMPATIBILITY OF THE DIMMER REQUIRED FOR RESPECTIVE LIGHT FIXTURE PRIOR BIDING. BASE BID ACCORDINGLY.



ELECTRICAL RISER KEYED WORK NOTES:

A. EXISTING #(2)100A, 120/208V, 3-PHASE, 4 WIRE ELECTRICAL BREAKER IN THE EXISTING PANEL "MDP" FOR THE PROJECT SPACE SHALL REMAIN. E.C. SHALL COORDINATE WITH BASE BUILDING FOR THE EXACT LOCATION OF THE EXISTING PANEL "MDP" AND EXACT POWER DISTRIBUTION IN THE FILED. E.C SHALL VERIFY THE OPERABLE CONDITION OF EXISTING BREAKER, REPLACE IF INOPERABLE. REPORT TO ENGINEER IF ANY DISCREPANCY FOUND. BASE BID ACCORDINGLY.

B. RELOCATE EXISTING 100A(M.L.O), 120/208V, 3-PHASE, 3-WIRE ELECTRICAL PANEL "A"(NAME TO BE VERIFIED AT FIELD). E.C. SHALL VERIFY THE EXACT RATING, SIZE, OPERABLE CONDITION, LOCATION OF EXISTING ELECTRICAL PANEL "A" IN FIELD. INFORM ENGINEER FOR ANY DISCREPANCY FOUND PRIOR TO BID.

C. RELOCATE EXISTING 100A(M.L.O), 120/208V, 3-PHASE, 3-WIRE ELECTRICAL PANEL "B"(NAME TO BE VERIFIED AT FIELD). E.C. SHALL VERIFY THE EXACT RATING, SIZE, OPERABLE CONDITION, LOCATION OF EXISTING ELECTRICAL PANEL "B" IN FIELD. INFORM ENGINEER FOR ANY DISCREPANCY FOUND PRIOR TO BID.

D. PROVIDE NEW 100A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FEEDER TO THE EXISTING RELOCATED PANEL "A" & PANEL "B" FOR THE PROJECT SPACE AS SHOWN IN DRAWING. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.

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

ELECTRICAL RISER SYMBOLS

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

ELECTRICAL GENERAL NOTE:

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

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

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ELECTRICAL PLAN NOTES AND RISER DIAGRAM

E-1

LIGHTING PLAN KEYED NOTES:

(A) CONNECT NEW 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 SWITCH BANK WITH OWNER/ARCHITECT.

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

(D) ELECTRICAL CONTRACTOR SHALL COORDINATE WITH SIGNAGE VENDOR FOR EXACT LOCATION, POWER REQUIREMENTS, CONTROL AND MAKE PROVISIONS ACCORDINGLY. BASE BID ACCORDINGLY.

(E) E.C. TO COORDINATE ALL FINAL JSP ILLUMINATED SIGNAGE LOCATIONS IN THE FIELD BASED ON PERMIT APPROVED SIGN DRAWING AND SHOP DRAWING SPECS AS APPROVED BY OWNER/BASE BUILDING/LANDLORD AND TENANT. DOCUMENTS TO BE PROVIDED BY JSP SIGNAGE CONTRACTOR.

(F) TO PROVIDE AND INSTALL ALL REQUIRED COMPONENTS AND CONTROLS FOR COMPLETE AND OPERABLE LED LIGHTING SYSTEM AMERICAN LIGHTING HTL-RGBW-100 SERIES TAPE LIGHT. INSTALL PER MANUFACTURERS INSTALLATION MANUAL CRITERIA.

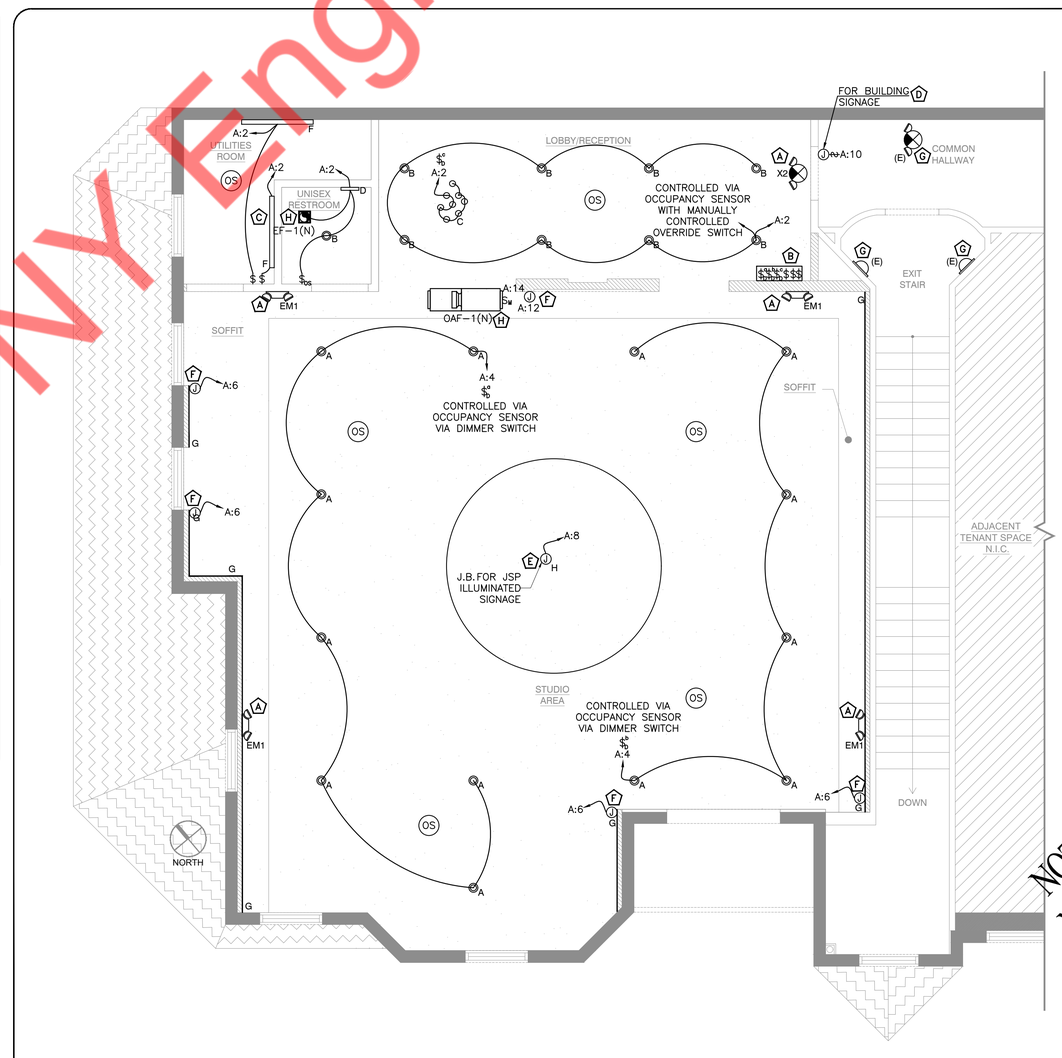
(G) EXISTING LIGHT FIXTURES ALONG WITH ITS CONTROL IN THIS AREA DENOTED BY (E) SHALL REMAIN CONNECTED TO EXISTING PANEL AS IT IS. E.C. SHALL VERIFY EXACT SCOPE OF WORK/LIABILITIES WITH LANDLORD/OWNER. PROVIDE NEW CONTROLS IF REQUIRE. BASE BID ACCORDINGLY.

(H) INTERCONNECT EXHAUST FAN EF-1(N) WITH ROOM LIGHT. E.C. TO COORDINATE WITH MECHANICAL DRAWINGS.

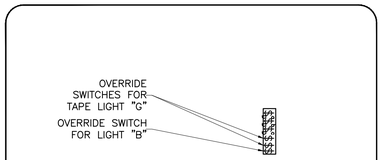
(H) INTERCONNECT EXHAUST FAN OAF-1(N) WITH FC-1(E), FC-4(E), AHU-1(N). E.C. TO COORDINATE WITH MECHANICAL DRAWINGS.

GENERAL LIGHTING NOTES:

1. COORDINATE FINAL FIXTURE MAKE & MODEL WITH ARCHITECT/OWNER.
2. ALL LIGHT FIXTURES CONSIDERED TO BE AS 120 VOLT FIXTURE. E.C. SHALL INFORM ENGINEER ON RECORD OTHERWISE.
3. UPPER CASE LETTER NEXT TO LIGHT FIXTURE DENOTES FIXTURE TYPE.
4. ALL EMERGENCY FIXTURES SHALL BE CONNECTED TO AN UNSWITCHED HOT CONDUCTOR.



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



SWITCH BANK DETAILS | SCALE 1/4" = 1'-0" | 2

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ELECTRICAL LIGHTING PLAN

E-2

POWER PLAN GENERAL NOTES:

1. GENERAL USE CABLING SHALL BE OF #12 AWG MINIMUM AT 120V FOR CABLE UPTO 80 FEET. FOR CABLE ABOVE 80 FEET USE #10 AWG CABLES. ADJUST WIRE SIZE FOR A MAXIMUM VOLTAGE DROP OF 3%.
2. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR EXACT HEIGHT OF OUTLETS.
3. E.C SHALL VERIFY ANY THIRD PARTY INSPECTION REQUIRED BY THE LOCAL JURISDICTION PRIOR TO BIDDING THIS PROJECT.
4. ALL LOW VOLTAGE WIRING TO BE IN CONDUIT U.N.O BY AHJ.
5. E.C TO COORDINATE WITH MECHANICAL CONTRACTOR FOR MECHANICAL EQUIPMENT SENSOR AND THERMOSTAT LOCATION.

ELECTRICAL CONTRACTOR TO COORDINATE WITH THE MECHANICAL AND PLUMBING CONTRACTOR FOR THE POWER REQUIREMENTS OF THE RESPECTIVE DEVICES/EQUIPMENT. USE EXISTING SHARED ELECTRICAL PANELS FOR THE SAME IF NEEDED. VERIFY THAT THE ELECTRICAL LOAD ON THE EXISTING PANELS SHALL NOT EXCEED THE PANEL CAPACITY.INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES.

POWER PLAN KEYED NOTES:

(A) ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE LV VENDOR FOR THE EXACT QUANTITY AND LOCATION OF THE LV DEVICES BEFORE COMMENCING ANY WORK.

(B) COORDINATE WIRE ROUTING IN MILLWORK IN FIELD WITH THE SUPPLIER. CONCEAL ALL WIRING INTERIOR TO MILLWORK. MILLWORK RETURN OPEN TO WALL.

(C) ALL 15/20A, 125V AND 250V NON LOCKING TYPE RECEPTACLES IN LOBBY/RECEPTION & HALLWAY SHALL BE LISTED TAMPER RESISTANCE AS PER NEC 406.12.

(D) CONVENIENCE RECEPTACLE AT 6" TO 12" AFF. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR THE EXACT LOCATION RECEPTACLE BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.

(E) E.C. SHALL COORDINATE WITH THE EQUIPMENT VENDOR FOR EXACT POWER REQUIREMENT AND WITH ARCHITECT/OWNER FOR EXACT LOCATION AND MOUNTING HEIGHT OF THE RECEPTACLES/JB IN THE FIELD.

(F) NEW FIRE TREATED PLYWOOD PHONE BOARD. MOUNT BOARD TIGHT TO CEILING AND PAINT TO MATCH ADJACENT SURFACE. INSTALL RECEPTACLE RECESSED INTO PHONE BOARD FLUSH WITH FACE ON PLYWOOD. INSTALL BOTTOM OF RECEPTACLE 8" FROM BOTTOM OF PHONE BOARD. PHONE BOARD TO BE 36W X 36H. COORDINATE FINAL LOCATION IN FIELD WITH OWNER/ARCHITECT.

(G) RELOCATE EXISTING 100A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A"(NAME TO BE VERIFIED AT FIELD). E.C. SHALL VERIFY THE EXACT RATING, SIZE, OPERABLE CONDITION, LOCATION AND CONNECTION OF EXISTING ELECTRICAL PANEL "B" IN FIELD. INFORM ENGINEER FOR ANY DISCREPANCY FOUND PRIOR TO BID.

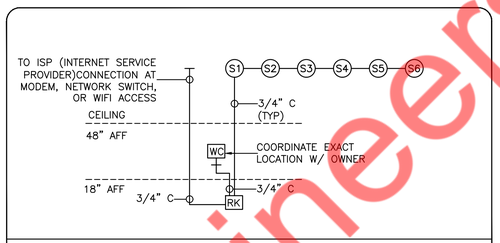
(H) RELOCATE EXISTING 100A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B"(NAME TO BE VERIFIED AT FIELD). E.C. SHALL VERIFY THE EXACT RATING, SIZE, OPERABLE CONDITION, LOCATION AND CONNECTION OF EXISTING ELECTRICAL PANEL "B" IN FIELD. INFORM ENGINEER FOR ANY DISCREPANCY FOUND PRIOR TO BID.

(I) E.C SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.

(J) 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.

(K) 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.

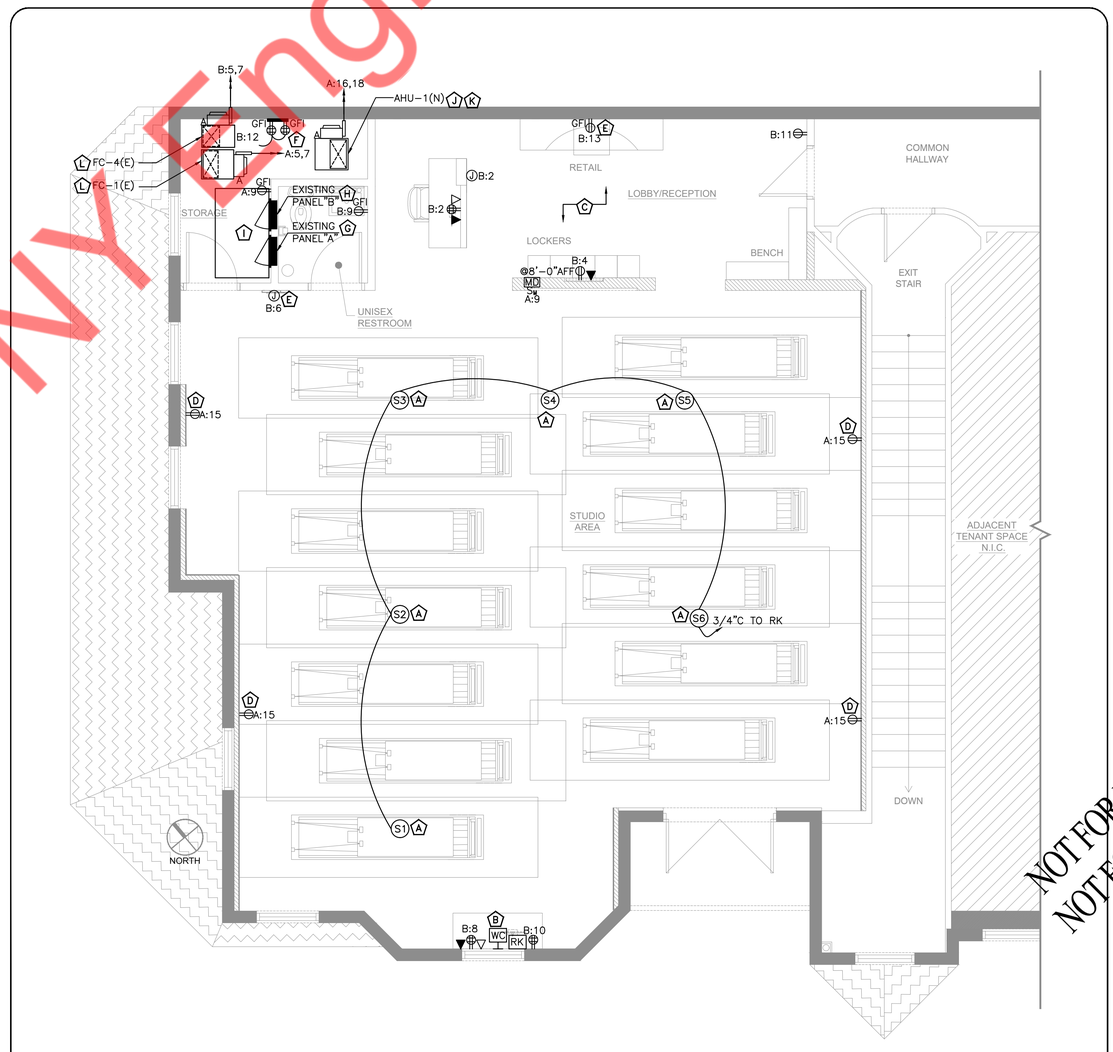
(L) EXISTING MECHANICAL UNIT SHALL BE RE-CIRCUITED TO THE RESPECTIVE EXISTING ELECTRICAL PANEL AS SHOWN IN DRAWING. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ANY OTHER REQUIREMENT BASED ON THE FIELD CONDITION. BASE BID ACCORDINGLY.



AV RISER DIAGRAM

AV RISER DIAGRAM GENERAL NOTE:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE NETWORK CONNECTION TO ISP/WAN AND FIRE ALARM CONTACT CLOSURE. COORDINATE WITH LV VENDOR BEFORE COMMENCING ANY WORK PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY. COORDINATE WITH FINAL AV DRAWINGS.



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

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ELECTRICAL POWER PLAN

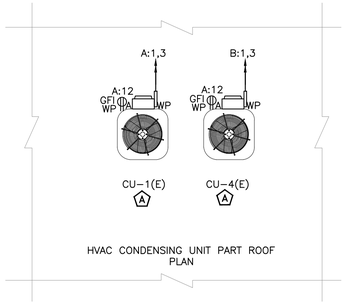
E-3

ROOF PLAN KEYED NOTES:

(A) EXISTING MECHANICAL UNIT SHALL REMAIN. E.C. TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ANY REQUIREMENT BASED ON THE FIELD CONDITION. E.C. SHALL GIVE POWER TO THE MECHANICAL UNIT FROM THE RELOCATED EXISTING ELECTRICAL PANEL.

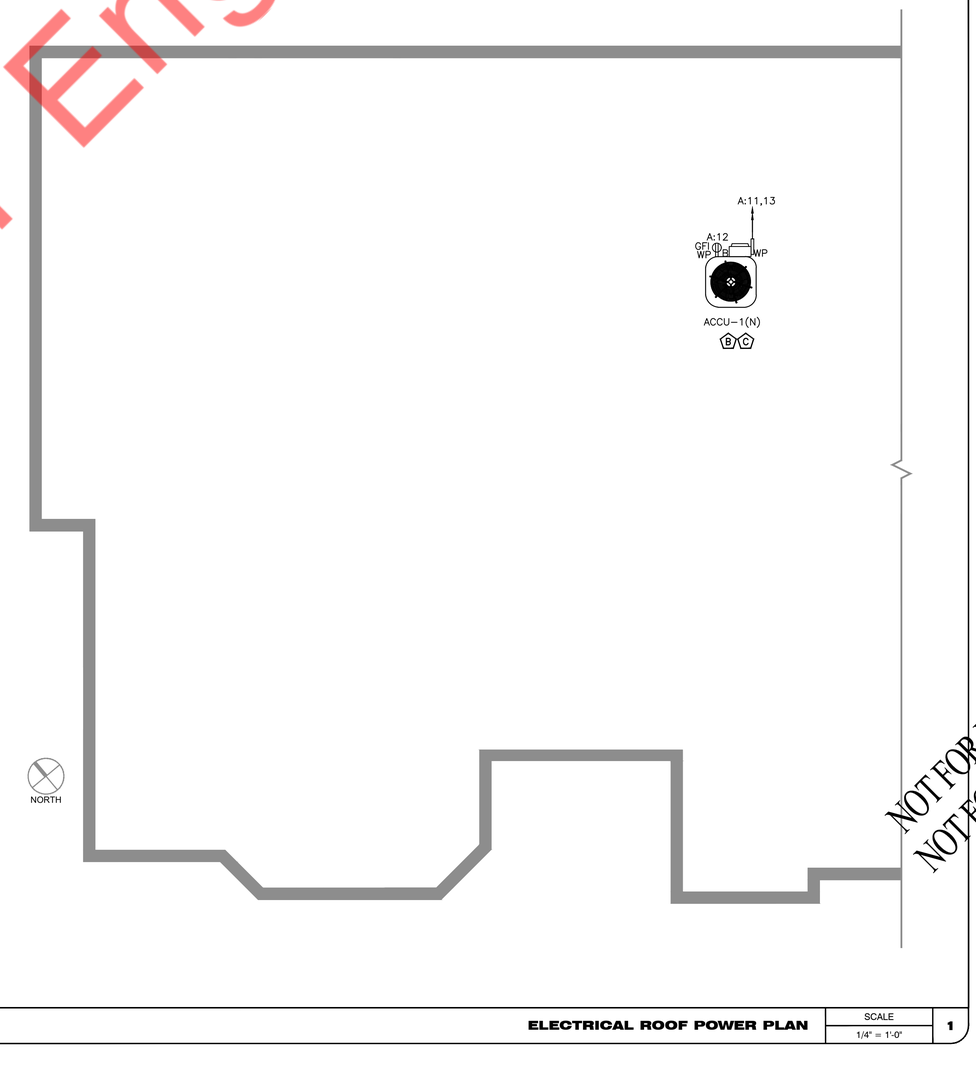
(B) ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXACT LOCATION AND POWER REQUIREMENT OF THE MECHANICAL UNITS IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.

(C) 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.



HVAC CONDENSING UNIT PART ROOF PLAN

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



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

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ELECTRICAL ROOF POWER PLAN

E-4

PANEL SCHEDULE:

PANEL:	A(E)							MOUNTING:	RECESSED
208Y/120	VOLTS,	3	PHASE,	4	WIRE			LOCATION:	STORAGE
MAIN CB	NA	MLO:	100A	BUS:	EXISTING	MIN,		FED FROM:	EXISTING MDP PANEL

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

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	15-2P	CU-1(E.)	H	1.25	2#12, #12G, 3/4"C	1.75			2#12, #12G, 3/4"C	0.50	L	LIGHTING - LOBBY/RECEPTION, REST ROOM, STORAGE	20	2
3			H	1.25			2.05		2#12, #12G, 3/4"C	0.80	L	LIGHTING - STUDIO AREA RECESED LIGHT	20	4
5	30-2P	FC-1 (C)	H	1.87	2#10, #10G, 3/4"C			2.87	2#12, #12G, 3/4"C	1.00	L	LIGHTING - STUDIO AREA TAPE LIGHT	20	6
7			H	1.87		2.87			2#12, #12G, 3/4"C	1.00	L	LIGHTING - JSP ILLUMINATION SIGNAGE	20	8
9	15	MOTORIZED DAMPER	M	0.10	2#12, #12G, 3/4"C		1.30		2#12, #12G, 3/4"C	1.20	L	BUILDING SIGNAGE	20	10
11	50-2P	ACCU-1(N) (A)	H	3.02	2#8, #10G, 3/4"C			3.52	2#12, #12G, 3/4"C	0.50	L	LED TAPE AROUND LOGO	20	12
13			H	3.02		3.56			2#12, #12G, 3/4"C	0.54	R	ROOF OUTLET	20	14
(D) 15	20	GENERAL RECEPTACLE - STUDIO	R	0.90	2#12, #12G, 3/4"C		1.42		2#12, #12G, 3/4"C	0.52	H	AHU-1(N) (B)	15-2P	16
17		SPACE						0.58		0.58	H			18
19		SPACE				0.00						SPACE		20
21		SPACE					0.00					SPACE		22
23		SPACE						0.00				SPACE		24
25		SPACE				0.00						SPACE		26
27		SPACE					0.00					SPACE		28
29		SPACE						0.00				SPACE		30
TOTAL CONNECTED LOAD (KVA)						8.18	4.77	6.96						

PANEL:	B(E)							MOUNTING:	RECESSED
208Y/120	VOLTS,	3	PHASE,	4	WIRE			LOCATION:	STORAGE
MAIN CB	NA	MLO:	100A	BUS:	EXISTING	MIN,		FED FROM:	EXISTING MDP PANEL

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

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	25-2P	CU-4(E.) (C)	H	1.75	2#10, #10G, 3/4"C	2.75			2#12, #12G, 3/4"C	1.00	R	RECEPTACLE RECEPTION DESK	20	2
3			H	1.75			1.93		2#12, #12G, 3/4"C	0.18	R	RECEPTACLE RECEPTION TV	20	4
5	40-2P	FC -4	H	3.28	2#8, #10G, 3/4"C			3.98	2#12, #12G, 3/4"C	0.70	E	WATER STATION	20	6
7			H	3.28		4.28			2#12, #12G, 3/4"C	1.00	R	RECEPTACLE STUDIO DESK	20	8
9	15	RECEPTACLE STORAGE	R	0.18	2#12, #12G, 3/4"C		0.54		2#12, #12G, 3/4"C	0.36	R	RECEPTACLE STUDIO DESK	20	10
11	15	RECEPTACLE LOBBY	R	0.18	2#12, #12G, 3/4"C			0.54	2#12, #12G, 3/4"C	0.36	R	RECEPTACLE - PHONE BOARD	20	12
13	15	RECEPTACLE MINIFRIDGE	E	0.70	2#12, #12G, 3/4"C	1.46			2#12, #12G, 3/4"C	0.76	M	OAF-1(N)	20	14
15							0.00							16
17								0.00						18
19						0.00								20
21							0.00							22
23								0.00						24
25						0.00								26
27							0.00							28
29								0.00						30
TOTAL CONNECTED LOAD (KVA)						8.48	2.47	4.52						

PANEL SCHEDULE GENERAL NOTES:

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

PANEL SCHEDULE KEYED NOTES:

(A) E.C TO PROVIDE (1) 50/2P BREAKER IN PLACE OF EXISTING (2) SPACES. BASE BID ACCORDINGLY.
(B) E.C TO PROVIDE (1) 15/2P BREAKER IN PLACE OF EXISTING (2) SPACES. BASE BID ACCORDINGLY.
(C) E.C SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR/EQUIPMENT VENDOR FOR EXACT BREAKER SIZE REQUIREMENT AT FIELD AND PROVIDE ACCORDINGLY. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCY BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
(D) E.C TO PROVIDE (1) 20/1P BREAKER IN PLACE OF EXISTING (1) SPACES. BASE BID ACCORDINGLY.

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ELECTRICAL PANEL SCHEDULE

E-5

EXISTING CONTIDITONS NOTES

STOP AND READ

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

PLUMBING FIXTURE SCHEDULE

					WATER		WASTE
Item No.	Qty.	Description	MANUFACTURER	MODEL	Hot	Cold	Direct
A1	1	WATER CLOSET	EXISTING TO REMAIN	EXISTING TO REMAIN	-	E	E
A2	1	LAVATORY	EXISTING TO REMAIN	EXISTING TO REMAIN	-	-	E
A3	1	LAVATORY FAUCET*	EXISTING TO REMAIN	EXISTING TO REMAIN	E	E	-
A10	1	WATER STATION	ELKAY	LBWDC00WHC	-	1/2"	2"

*LAVATORY FAUCET MAXIMUM HOT WATER TEMPERATURE MUST BE REGULATED TO NOT EXCEED 110°F BY A DEVICE COMPLYING WITH ASSE 1070. PROVIDE IF EXISTING IS NOT AVAILABLE OR NOT IN GOOD CONDITION.

SCOPE OF WORK

PROVIDE ALL PLUMBING FOR NEW PILATES STUDIO INCLUDING ALL WATER, SANITARY AND VENT LINES AND CONNECT TO EXISTING UTILITIES.

COORDINATE WITH GC AND MECH CONTRACTOR FOR ANY REQUIRED CONDENSING WATER LINES.

FIXTURE BRANCH SCHEDULES

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
LAVATORY (E)	E	E	E	E
WATER CLOSET (E)	E	-	E	E
WATER STATION (N)	1/2"	-	2"	1-1/2"

PLUMBING LEGEND

—SAN—	SANITARY SEWER PIPING
—V—	VENT PIPING
— - —	DOMESTIC COLD WATER PIPING
	PIPE RISE
	PIPE DROP
	P-TRAP
CW	DOMESTIC COLD WATER
	GATE VALVE
	POINT OF CONNECTION

PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THIS SET. CONTRACTOR TO VERIFY THAT ALL EQUIPMENT SHOWN AS EXISTING MATCHES THE DESCRIPTIONS AND SPECIFICATIONS SHOWN ON DRAWINGS AND SCHEDULES. IF DIFFERENT NOTIFY ARCHITECT/ENGINEER BEFORE BIDDING, ORDERING OR PRECEDING WITH WORK.
3. ALL EQUIPMENT WHICH IS TO REMAIN MUST BE REFURBISHED TO A LIKE NEW CONDITION.
4. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
5. ALL MATERIALS SHALL BE NEW.
6. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
7. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
8. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTION AND TESTS. PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
9. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING, EQUIPMENT, ETC.
10. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
11. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
12. EXPOSED WATER PIPING SHALL BE TYPE "L" COPPER FOR 2" AND UNDER. WATER PIPING IN WALLS AND UNDERGROUND MAY BE "PEX" TYPE PIPING THAT MEETS ANSI/NSF STANDARD 61.
13. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC BUT MAY NOT RUN THRU RATED ASSEMBLIES OR IN PLENUMS.
14. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
15. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AS PER CODE AND WITH GOOD ENGINEERING PRACTICE.
16. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS; EXCEPT AT WATER HEATER AS PER CODE.
17. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
18. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM, TO ACHIEVE THE SAME RATING AS WALLS OR FLOORS AS PART OF THE PLUMBER'S WORK.
19. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF CERTIFICATE OF OCCUPANCY. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE WITHIN 72 HOURS OF NOTIFICATION AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED. PROVIDE COPY TO LL.
20. STUDOR MINI/MAXI AIR ADMITTANCE VALVES MAY NOT BE USED AS AN ALTERNATE TO VENT PIPING THRU ROOF.
21. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL CLEANOUTS.
22. NO COMBUSTIBLE MATERIAL TO BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
23. NO WATER, SANITARY OR DRAINAGE PIPING PERMITTED IN ELECTRICAL OR ELEVATOR EQUIPMENT ROOMS.
24. WATER PIPING INSULATION SHALL BE 1" THICK ARMAFLEX INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR ALL HOT WATER PIPING. WHERE DOMESTIC WATER TEMPERATURES CAN CAUSE SWEATING, ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX INSULATION.
25. CONDENSATE DRAIN LINES TO BE RUN UNDER SLAB.IN PVC SCH40 PIPE AND STUBBED OUT OF WALL TO UNIT. TIE-IN OF A/C TO BE BY OTHERS. PVC PIPING WITH 1/2" THICK ARMAFLEX INSULATION MAY BE USED IN LOCATIONS WHERE ALLOWED BY LOCAL CODES. SEE PLUMBING DRAWINGS FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40 FOR SIZE AND LOCATION OF PIPING. PVC WILL BE MIN. SCHEDULE 40.
26. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.
27. NO JOINTS UNDERGROUND FOR COPPER.
28. PLUMBING FIXTURES SHALL COMPLY WITH 2023 FBC-PLUMBING, 8TH EDITION.
29. WATER HAMMER ARRESTORS AS PER 2023 FBC-PLUMBING, 8TH EDITION.
30. PLUMBING CONTRACTOR SHALL REVIEW ALL BID DOCUMENTATION.
31. PLUMBING CONTRACTOR SHALL REVIEW WALL FINISHES @ LOCATION REQUIRING BARRIER-FREE COMPLIANCE (EXAMPLE: CENTER LINE TO TOILET).
32. CONSTRUCTION "AS BUILT" DRAWINGS AND DOCUMENTS SHALL BE PROVIDED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF ACCEPTANCE. PROVIDE A COPY TO LL.
33. OPERATION MANUALS AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER. PROVIDE A COPY TO LL.

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GENERAL NOTES & SCHEDULES

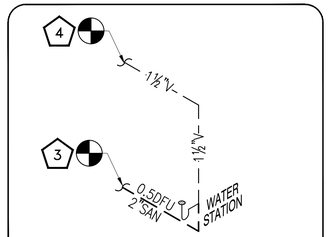
P-1

SANITARY GENERAL NOTES

1. UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/16" PER FOOT OF RUN FOR PIPE 8" AND OVER, 1/8" PER FOOT FOR PIPE 3" TO 6" AND 1/4" PER FOOT FOR PIPE 2-1/2" AND SMALLER.
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO VERIFY THE EXISTING SANITARY AND VENT LOCATION AND ROUTING. MAKE NECESSARY CHANGES TO NEW PIPING AS PER THE EXISTING SITE CONDITION.

SANITARY PLAN AND RISER KEYNOTES

1. EXISTING WATER CLOSET TO REMAIN WITH EXISTING SANITARY AND VENT CONNECTION. ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
2. EXISTING LAVATORY TO REMAIN WITH EXISTING SANITARY AND VENT CONNECTION. ASSOCIATED ACCESSORIES AND FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
3. CONNECT NEW 2" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE OF ADEQUATE SIZE IN SPACE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, LOCATION, ROUTING AND INVERT ON SITE AND MAKE NECESSARY CHANGES IF REQUIRED.
4. CONNECT NEW 1½" VENT PIPING TO EXISTING VENT PIPING OF ADEQUATE SIZE IN SPACE. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING VENT PIPING AND MAKE NECESSARY CHANGES IF REQUIRED.



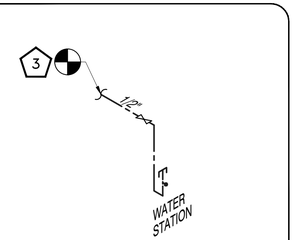
SANITARY RISER | SCALE N.T.S | 3

WATER GENERAL NOTES

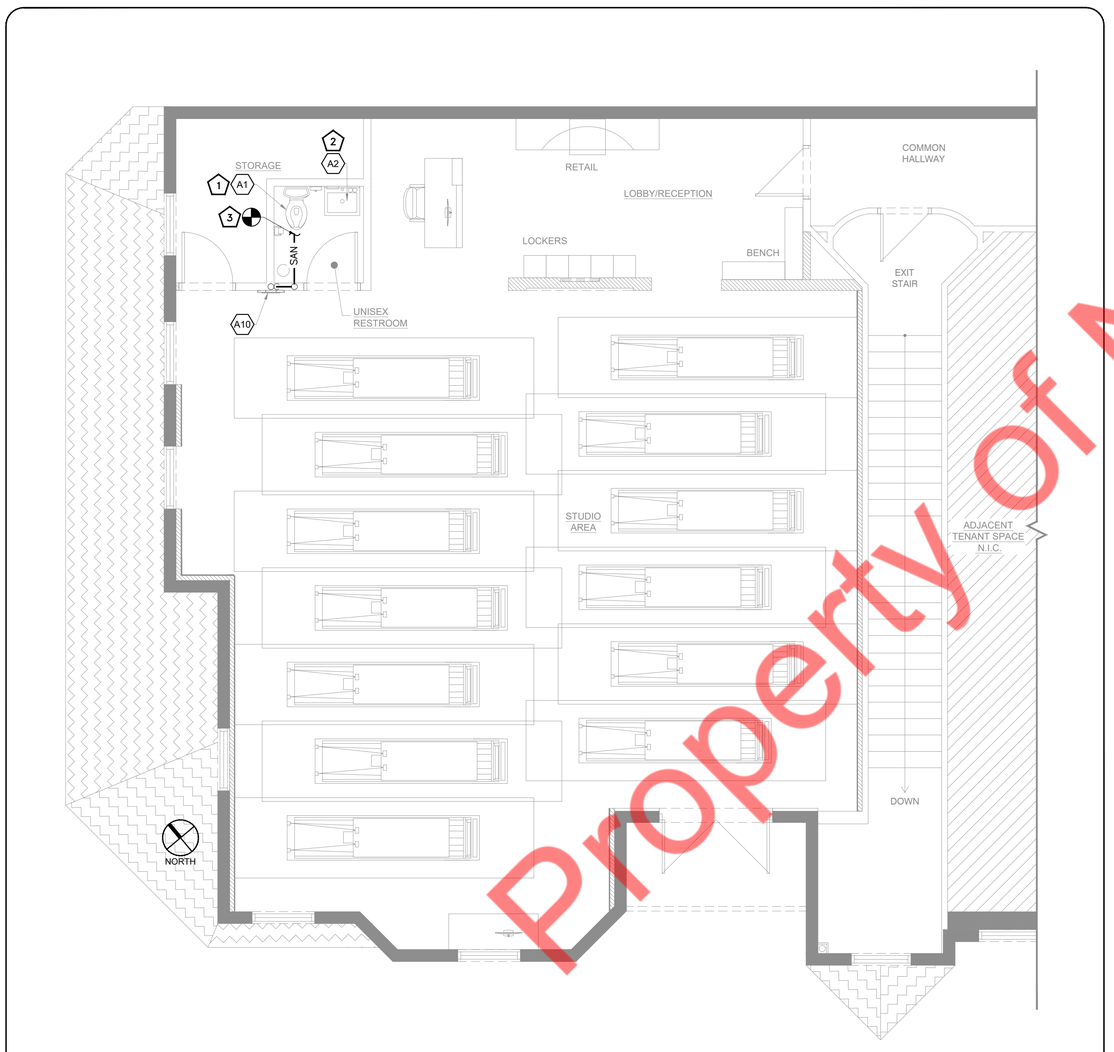
1. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
2. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO FIELD VERIFY THE EXISTING WATER PIPING SIZE AND LOCATION.
4. ALL WATER PIPES ARE RUNNING ABOVE THE CEILING UNLESS UNTIL SPECIFIED.
5. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
6. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTORS, BALANCING VALVES AND SHUT-OFF VALVES AS REQUIRED.

WATER PLAN AND RISER KEY NOTES

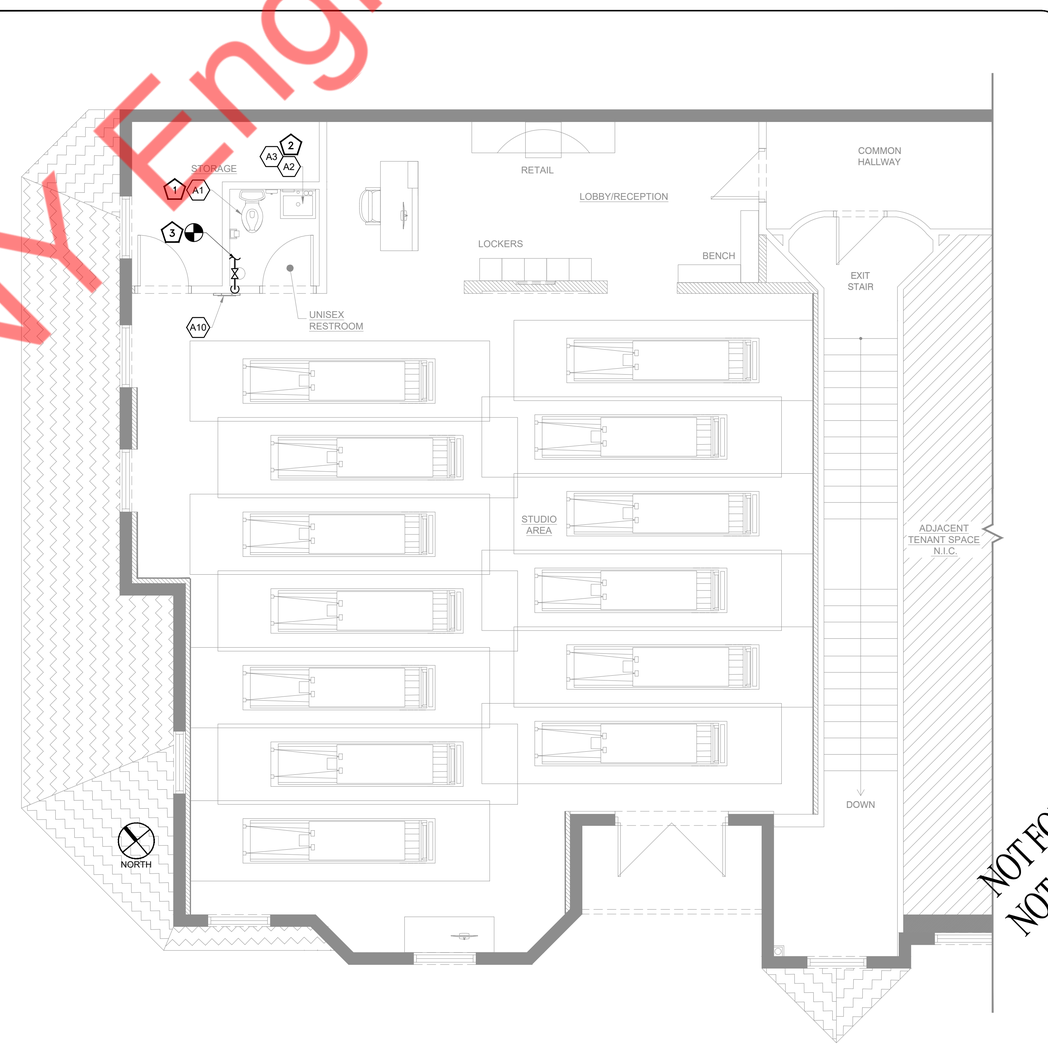
1. EXISTING WATER CLOSET TO REMAIN WITH EXISTING CW CONNECTION, ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING & REPLACE IF REQUIRED.
2. EXISTING LAVATORY TO REMAIN WITH EXISTING CW/HW CONNECTION, EXISTING WATER HEATER, ASSOCIATED ACCESSORIES & FITTINGS. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING & REPLACE IF REQUIRED.
3. CONNECT NEW 1/2" CW LINE TO EXISTING WATER LINE IN SPACE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING CW LINE IN SPACE AND MAKE NECESSARY CHANGES IF REQUIRED.



WATER RISER | SCALE N.T.S | 4



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



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

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SANITARY AND WATER PLAN AND RISERS

P-2