

GENERAL ABBREVIATIONS			
A	AMPERES	KVA	KILOVOLT AMPERES
ADA	AMERICANS WITH DISABILITIES ACT	KW	KILOWATTS
AF	AMPERE FRAME	LTG	LIGHTING
AFF	ABOVE FINISHED FLOOR	LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
AFG	ABOVE FINISHED GRADE	MC	METAL CLAD CABLE
AHJ	AUTHORITY HAVING JURISDICTION	MCB	MAIN CIRCUIT BREAKER
AHU	AIR HANDLING UNIT	MCC	MOTOR CONTROL CENTER
AIC	AMPERE INTERRUPTING CAPACITY	MCP	MOTOR CIRCUIT PROTECTOR
AL	ALUMINUM	MH	MOUNTING HEIGHT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MISC	MISCELLANEOUS
ARCH	ARCHITECT	MLO	MAIN LUGS ONLY
AT	AMPERE TRIP	MOCP	MAXIMUM OVERCURRENT PROTECTION
ATS	AUTOMATIC TRANSFER SWITCH	MTG	MOUNTING
ATC	AUTOMATIC TEMPERATURE CONTROL	N	NEUTRAL
AWG	AMERICAN WIRE GAUGE	NC	NORMALLY CLOSED
BFG	BELOW FINISH GRADE	NEC	NATIONAL ELECTRIC CODE
BLDG	BUILDING	NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
C	CONDUIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CAT	CATALOG	NFSS	NON-FUSED SAFETY SWITCH
CB	CIRCUIT BREAKER	NO	NORMALLY OPEN OR NUMBER
CBM	CERTIFIED BALLASTS MANUFACTURERS	NTS	NOT TO SCALE
CKT	CIRCUIT	P	POLE
CL	CENTERLINE	PB	PUSHBUTTON
CLF	CURRENT LIMITING FUSE	PH	PHASE
COL	COLUMN	PNL	PANELBOARD
CPT	CONTROL POWER TRANSFORMER	POS	PROVIDED UNDER OTHER SECTIONS
CT	CURRENT TRANSFORMER	PVC	POLYVINYL CHLORIDE
CU	COPPER	PWR	POWER
(D)	DEMOLITION	QTY	QUANTITY
DWG	DRAWING	REQ'D	REQUIRED
(E)	EXISTING	RMC	RIGID METAL CONDUIT
(ER)	EXISTING TO REMAIN	RMS	ROOT MEAN SQUARED
EC	EMPTY CONDUIT	RNMC	RIGID NON-METALLIC CONDUIT
EF	EXHAUST FAN	RTU	ROOF TOP UNIT
EM	EMERGENCY	SP	SPARE
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EPO	EMERGENCY POWER OFF	SYM	SYMMETRICAL
ESB	ENERGY SAVING BALLAST	TEL	TELEPHONE
EWC	ELECTRIC WATER COOLER	TMCB	THERMAL MAGNETIC CIRCUIT BREAKER
F	FUSE	UG	UNDERGROUND OR UNDERGRADE
FA	FIRE ALARM	UL	UNDERWRITERS LABORATORIES
FB	FAN BOX	UON	UNLESS OTHERWISE NOTED
FLA	FULL LOAD AMPERES	V	VOLT
FMC	FLEXIBLE METAL CONDUIT	VAV	VOLUME AIR TERMINAL BOX
FSS	FUSED SAFETY SWITCH	VT	VOLTAGE TRANSFORMER
FT	FEET	W	WIRE
GFI	GROUND FAULT INTERRUPTER	WH	WATER HEATER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	WP	WEATHERPROOF
GND,G	GROUND OR GROUNDING	XFMR	TRANSFORMER
GRMC	GALVANIZED RIGID METALLIC CONDUIT	△	DELTA
HOA	HAND, OFF, AUTOMATIC SWITCH	Y	WYE
HP	HORSEPOWER	∅	PHASE
HPF	HIGH POWER FACTOR	#	NUMBER
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS		
IG	ISOLATED GROUND		
IMC	INTERMEDIATE METAL CONDUIT		
INT	INTERLOCK		
K	KELVIN		
KCMIL	THOUSAND CIRCULAR MILS		

GENERAL NOTES	
1.	ALL WIRING SHALL BE RUN CONCEALED UNLESS SPECIFIED OTHERWISE.
2.	ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
3.	ALL COMPONENTS SHOWN ON THE RISER DIAGRAMS, BUT NOT ON THE PLANS OR VICE VERSA, SHALL BE INCLUDED AS IF SHOWN ON BOTH.
4.	EXACT LOCATION OF MECHANICAL EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL DRAWINGS.
5.	CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT. COORDINATE EXACT MOUNTING LOCATIONS WITH THE ARCHITECT.
6.	REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS AND EXACT LOCATIONS OF ALL DEVICES.
7.	REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. IF DISCREPANCIES OCCUR, CONTRACTOR MUST NOTIFY ARCHITECT.
8.	BRANCH CIRCUIT WIRING MAY NOT BE SHOWN GRAPHICALLY ON DRAWINGS AND MAY BE INDICATED BY CIRCUIT NUMBERS BESIDE FIXTURES, DEVICES AND EQUIPMENT. PROVIDE COMPLETE WIRING SYSTEM WHETHER OR NOT INDICATED GRAPHICALLY. PHASE BALANCE ALL PANELBOARDS IN THE FIELD.
9.	THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. THE DRAWINGS ARE NOT INTENDED TO BE ABSOLUTELY PRECISE. THE DRAWINGS ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, JUNCTION BOX, FITTING AND COMPONENT. THE PURPOSE OF THE DRAWINGS IS TO INDICATE A SYSTEMS CONCEPT, THE MAIN COMPONENTS OF THE SYSTEM AND THE APPROXIMATE GEOMETRICAL RELATIONSHIP. BASED ON THE SYSTEMS CONCEPT, THE MAIN COMPONENTS AND THE APPROXIMATE GEOMETRICAL RELATIONSHIPS, THE CONTRACTOR SHALL PROVIDE ALL OTHER COMPONENTS AND MATERIALS NECESSARY TO MAKE THE SYSTEMS FULLY COMPLETE AND OPERATIONAL.
10.	ALL SYMBOLS MAY NOT BE USED IN THIS DRAWING.

LEGENDS	
	RECESSED DOWNLIGHT
	1 BULB VANITY LIGHT
	ENTRANCE DOWN LIGHT
	MEDIUM PENDANT
	CHANDELIER LIGHTING FIXTURE
	4' SUSPENDED LINEAR LIGHT FIXTURE
	SEMI FLUSH LIGHTING FIXTURE
	LED STRIP LIGHTING FIXTURE
	WALL LIGHTING FIXTURE
	ELECTRICAL CABLE
	OCCUPANCY SENSOR
	125 VOLT, 2 POLE, 3 WIRE, 20 AMP., DUPLEX RECEPTACLE.
	125 VOLT, 2 POLE, 3 WIRE, 20 AMP., DOUBLE DUPLEX RECEPTACLE.
	125 VOLT, 2 POLE, 3 WIRE, 20 AMP., DUPLEX CEILING RECEPTACLE.
	125 VOLT, 2 POLE, 3 WIRE, 20 AMP., USB RECEPTACLE.
	SMOKE ALARM
	HEAT ALARM
	CARBON MONOXIDE ALARM
Receptacle Subscripts:	
"2"	INDICATES CIRCUIT NUMBER
"GFI"	INDICATES RECEPTACLE EQUIPPED WITH INTERGRAL GROUND FAULT INTERRUPTER
"AFCI"	ARC-FAULT CIRCUIT INTERRUPTER
"WP"	INDICATES WEATHERPROOF
"IG"	ISOLATED GROUND
"C"	COMPUTER
\$\$\$	INDICATES TYPICAL SWITCH
\$	INDICATES DIMMER SWITCH
3\$	3-WAY DIMMER SWITCH
2\$	2-WAY DIMMER SWITCH
1\$	BATH-FAN TIMER SWITCH

EQUIPMENT LEGEND	
PANEL-H1	208/120 VOLT, 3Ø, 4 WIRE PANEL
PANEL-H2	480/277 VOLT, 3Ø, 4 WIRE PANEL
	JUNCTION AND/OR PULL BOX
	MOTOR
	EXHAUST FAN
	GARAGE DOOR OPENER
	DISCONNECT SWITCH (FUSED); COORDINATE FUSE SIZE WITH MECHANICAL.
	OCCUPANCY SENSOR
	TV SPEAKER
	BLUETOOTH SPEAKER
	LANDLINE PHONE POINT
30/20/3	

CIRCUITRY, RACEWAYS AND FEEDERS LEGEND	
	CIRCUIT HOMERUN TO PANELBOARD. PANEL DESIGNATION IS "LP2B". CIRCUIT BREAKER DESIGNATION IS CIRCUIT #1,3,5.
	GENERAL POWER BRANCH CIRCUIT HOMERUN TO PANELBOARD. WITHOUT EXCEPTION, ALL BRANCH CIRCUIT WIRING AND HOMERUNS RELATED TO GENERAL POWER AND LIGHTING CIRCUITS SHALL INCLUDE A SEPARATE GREEN EQUIPMENT GROUND CONDUCTOR.
	ALL CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH SCHEDULES, NEC AND SPECIFICATIONS.
	CIRCUITRY TURNING UP
	CIRCUITRY TURNING DOWN
	FEEDER SIZE TAG SYMBOL. REFER TO "LEGEND OF FEEDER SIZES".

BRANCH CIRCUIT SCHEDULE			
CIRCUIT TYPE	CIRCUIT BREAKER	CONDUCTORS	CONDUIT
1 POLE - 1 PHASE 2 WIRE + GROUND	20A-1P	2 #12 + 1 #12 G.	3/4"
	30A-1P	2 #10 + 1 #10 G.	3/4"
	40A-1P	2 #8 + 1 #10 G.	3/4"
	50A-1P	2 #6 + 1 #10 G.	3/4"
	60A-1P	2 #4 + 1 #10 G.	1 1/4"
2 POLE - 1 PHASE 2 WIRE + GROUND	20A-2P	2 #12 + 1 #12 G.	3/4"
	30A-2P	2 #10 + 1 #10 G.	3/4"
	40A-2P	2 #8 + 1 #10 G.	3/4"
	50A-2P	2 #6 + 1 #10 G.	3/4"
	60A-2P	2 #4 + 1 #10 G.	1 1/4"
2 POLE - 1 PHASE 3 WIRE + GROUND	20A-2P	3 #12 + 1 #12 G.	3/4"
	30A-2P	3 #10 + 1 #10 G.	3/4"
	40A-2P	3 #8 + 1 #10 G.	3/4"
	50A-2P	3 #6 + 1 #10 G.	3/4"
	60A-2P	3 #4 + 1 #10 G.	1 1/4"
Schedule Notes:			
1. TYPE MC CABLE SHALL INCLUDE FULL SIZE INSULATED GROUND CONDUCTOR. SIZES AS INDICATED IN SCHEDULE. REFER TO SPECIFICATIONS FOR PERMITTED APPLICATION.			
2. REFER TO FEEDER SCHEDULE ON ELECTRICAL POWER RISER DIAGRAM FOR ADDITIONAL INFORMATION.			
3. ALL CONDUCTOR SIZES ARE BASED ON CONDUIT LENGTHS OF 60 FEET FOR 120 VOLT BRANCH CIRCUITS AND 150 FEET FOR 277 VOLT BRANCH CIRCUITS. IF LENGTH EXCEEDS 60 FEET (120V, 20A CIRCUITS) OR 150 FEET (277V, 20A CIRCUITS), THEN USE WIRE SIZE DENOTED BELOW AND INCREASE CONDUIT SIZE AS REQUIRED BY NEC.			
4. TREAT 15A CIRCUIT SIMILAR TO 20A CIRCUIT AND 25A CIRCUIT SIMILAR TO 30A CIRCUIT.			
WIRE SIZE	CIRCUIT LENGTH		
	120V CIRCUIT	240V CIRCUIT	
	#10	60' TO 120'	150' TO 240'
	#8	120' TO 180'	ABOVE 240'
#6	180' AND ABOVE	-	

TYPICAL DEVICE MOUNTING HEIGHTS DETAIL	
NOTES: 1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE EXCEPT EXIT SIGNS. 2. DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE. 3. ALL DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE NOTED. 4. COORDINATED EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.	

BLU STEP

LOT 7, BUILDING 31
430 SW LONGVIEW BLVD, Ste 200
LEE'S SUMMIT, MO, 64081

DATE: 02/28/2024
SCALE: 1/4" = 1'
DRAWN BY: S.J.
PAGE:

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ISSUE RECORD

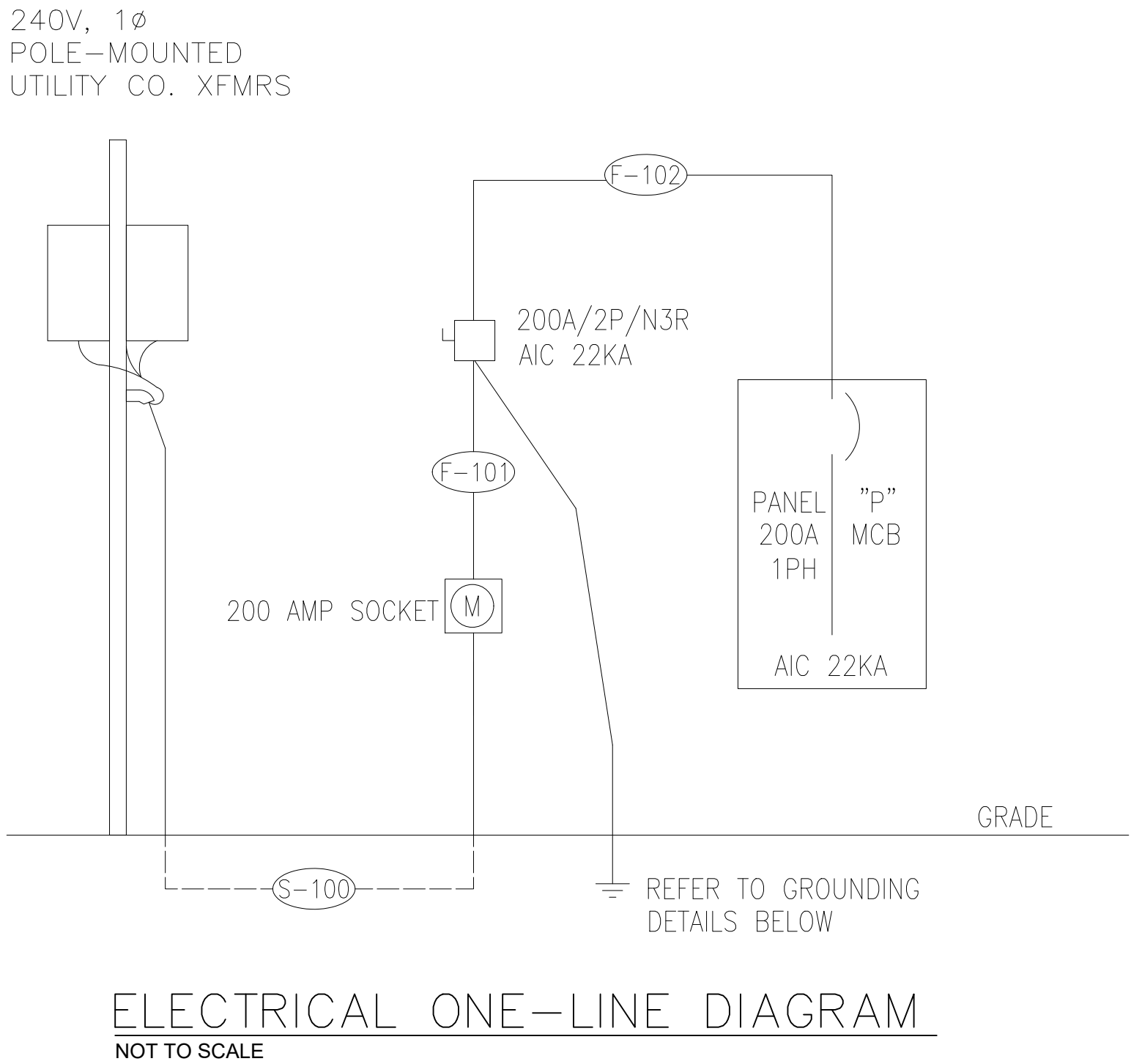
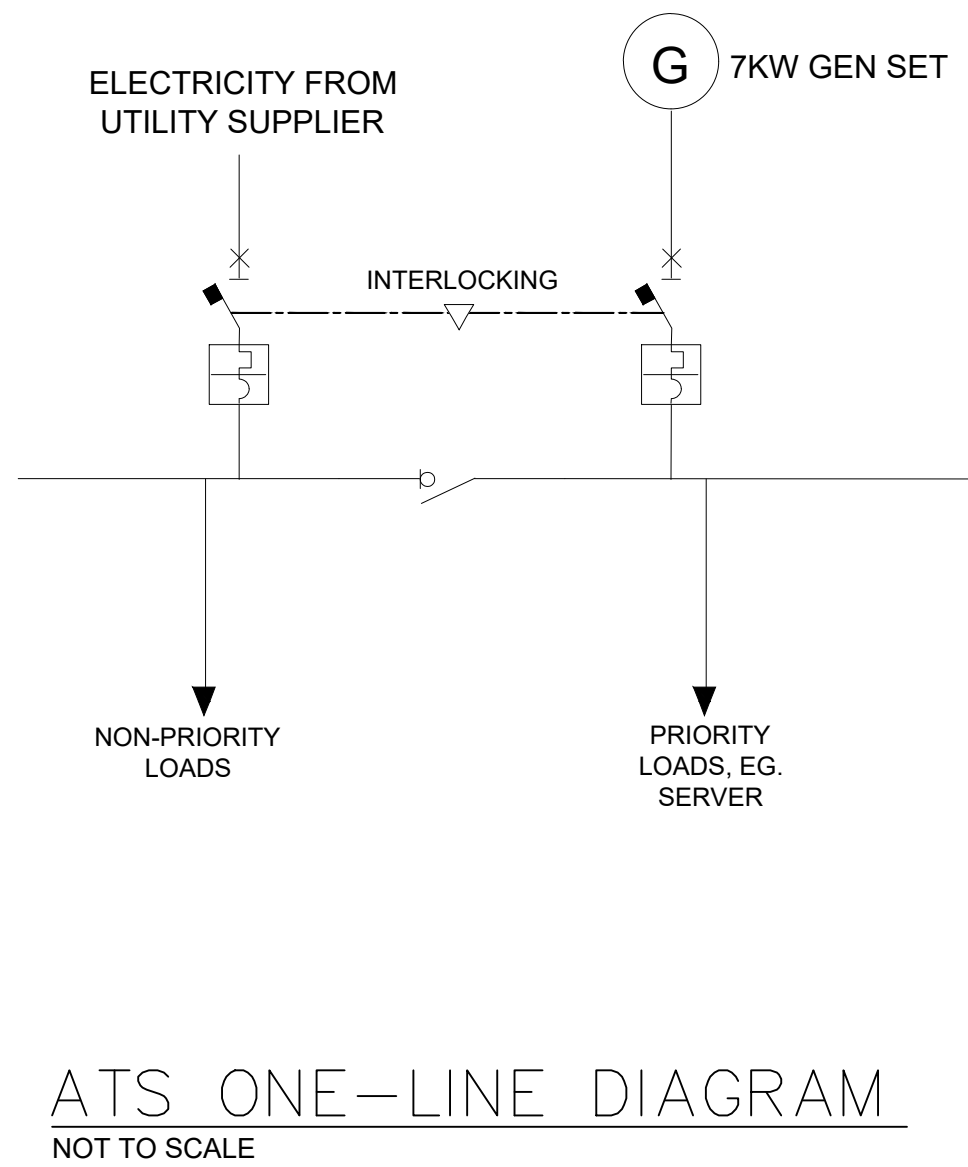
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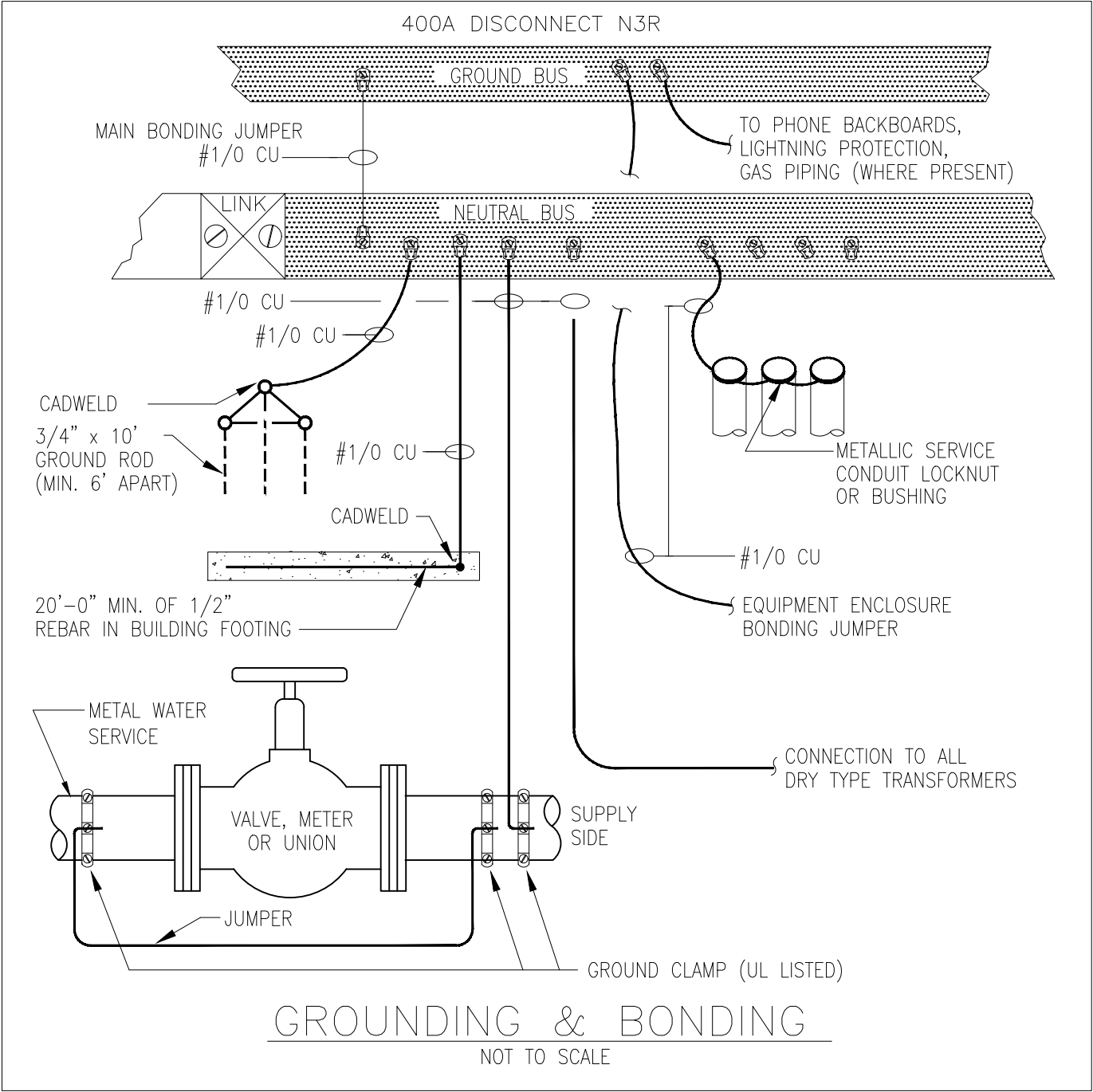
ELECTRICAL LEGENDS AND NOTES

E-1

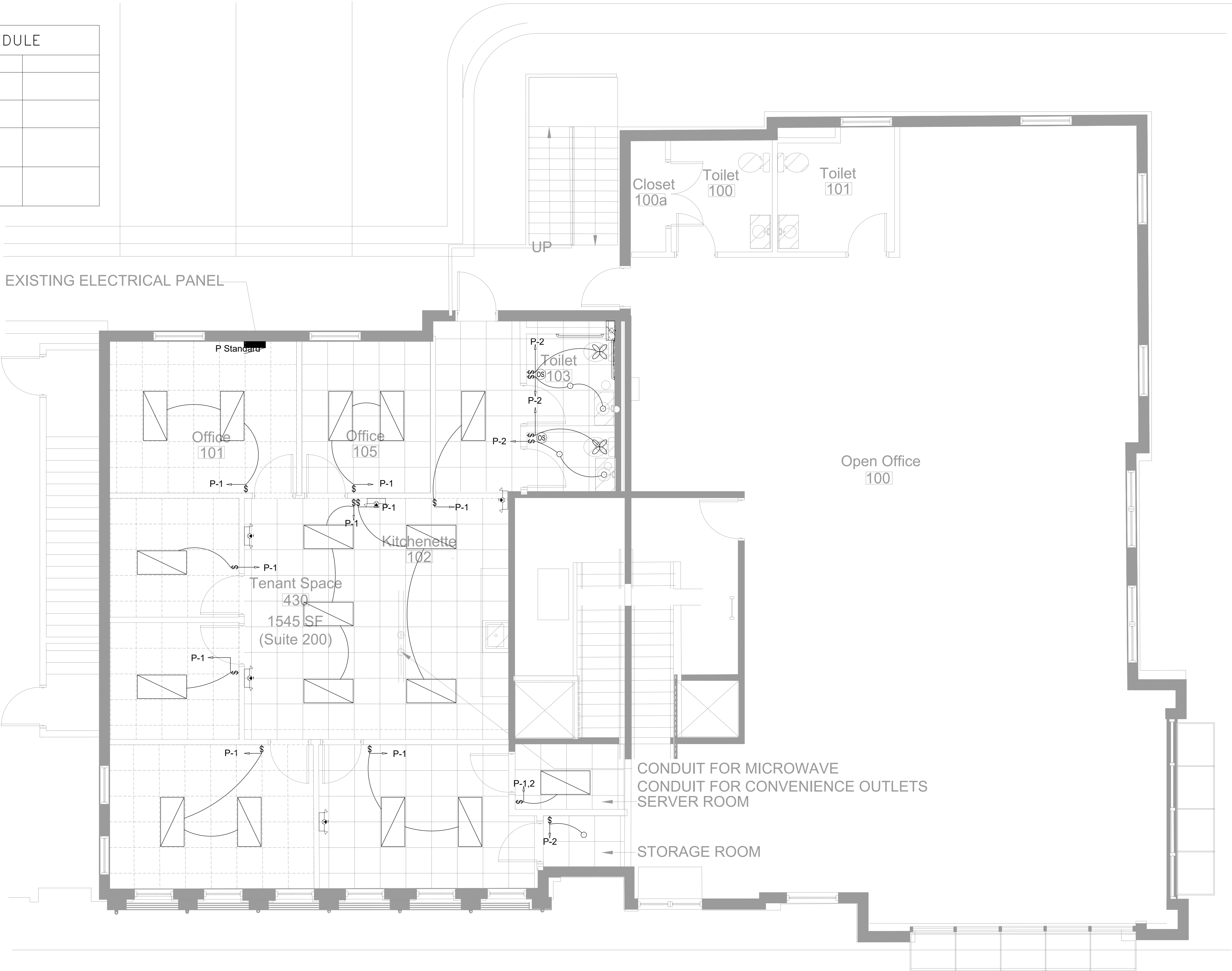
PANEL P											
VOLTAGE (L-N):				ENCLOSURE TYPE: Indoor							
VOLTAGE (L-L):				MOUNTING: SURFACE							
PHASES, WIRES:				AIC RATING: 22000							
MINIMUM BUS CAPACITY (A):				NOTES: PER NEC							
MAIN O.C. DEVICE (A):				200 A							
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (VA)				POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B						
1	LIGHTINNG-OFFICE	15	1	680	260			1	15	LIGHTINNG-TOILET-3	2
3,5	AC-1	45	2			3600	3600	2	45	AC-2	4,6
3,5	AC-1	45	2	3600	3600			2	45	AC-2	4,6
7,9	AC-3	45	2			3600	2000	2	20	AC-4 (SERVER)	8,10
7,9	AC-3	45	2	3600	2000			2	20	AC-4 (SERVER)	8,10
11,13	POWER-SERVER	30	2			2880	180	2	20	POWER-KITCHEN-M. OVEN	12,14
11,13	POWER-SERVER	30	2	2880	180			2	20	POWER-KITCHEN-M. OVEN	12,14
15	POWER-spare	20	1			0	160	1	20	POWER-OUTDOOR	16
17	POWER-OFFICE	20	1	520	1420			1	20	POWER-OFFICE	18
19	POWER-OFFICE	20	1			700	0	1	20	POWER-SPARE	20
21,23	POWER-KITCHEN-SPARE	20	2	0	0			1	20	POWER-SPARE	22
21,23	POWER-KITCHEN-SPARE	20	2			0	980	1	20	POWER-KITCHEN	24
25	POWER-OUTDOOR	20	1	1400	1920			1	20	POWER-SERVER	26
27	POWER-REFRIGERATOR	20	1			1000	0	1	20	POWER-SPARE	28
				CONNECTED LOAD PHASE TOTALS (VA)							
				22060				18700			
				CONNECTED LOAD (KVA)				DEMAND FACTOR			
				0.2				1.00			
				Motors				0.2			
				7.2				1.25			
				Motors (Largest)				9.0			
				6.5				1.00			
				Receptacles (0 - 10 KVA)				6.5			
				0.7				1.25			
				Lighting				0.9			
				26.1				1.00			
				Equipment				26.1			
				TOTAL:				40.8			
				LOAD (AMPS):				169.8			
								42.7			
								DEMAND LOAD (KVA)			
								5.3 KVA			
								DEMAND LOAD SPARE CAPACITY			
								21.9 AMPS			
								DEMAND LOAD SPARE CAPACITY			
								11%			



SCHEDULE OF FEEDERS & SERVICES										
Feeder/Service Description				Number of Runs	Conductor Size			Conduit Diameter (in)	Fault Value	
Designation	Equipment Served	Conductor Ampacity (Amps)	Copper or Aluminum		Phase Conductor	Neutral Conductor	Equipment Ground			
S 1 00	MAIN METER	200	CU	1 set	2 # 3/0	1 # 3/0	-	2	-	
F 1 01	DISCONNECT	200	CU	1 set	2 # 3/0	1 # 3/0	1 # 6	2	-	
F 1 02	PANEL 1/2	200	CU	1 set	2 # 3/0	1 # 3/0	1 # 6	2	-	
KEY: "CU" - COPPER "AL" - ALUMINUM										
NOTES: COPPER OR ALUMINUM REFERS TO ALL CONDUCTORS (PHASE, NEUTRAL, AND GROUND)										



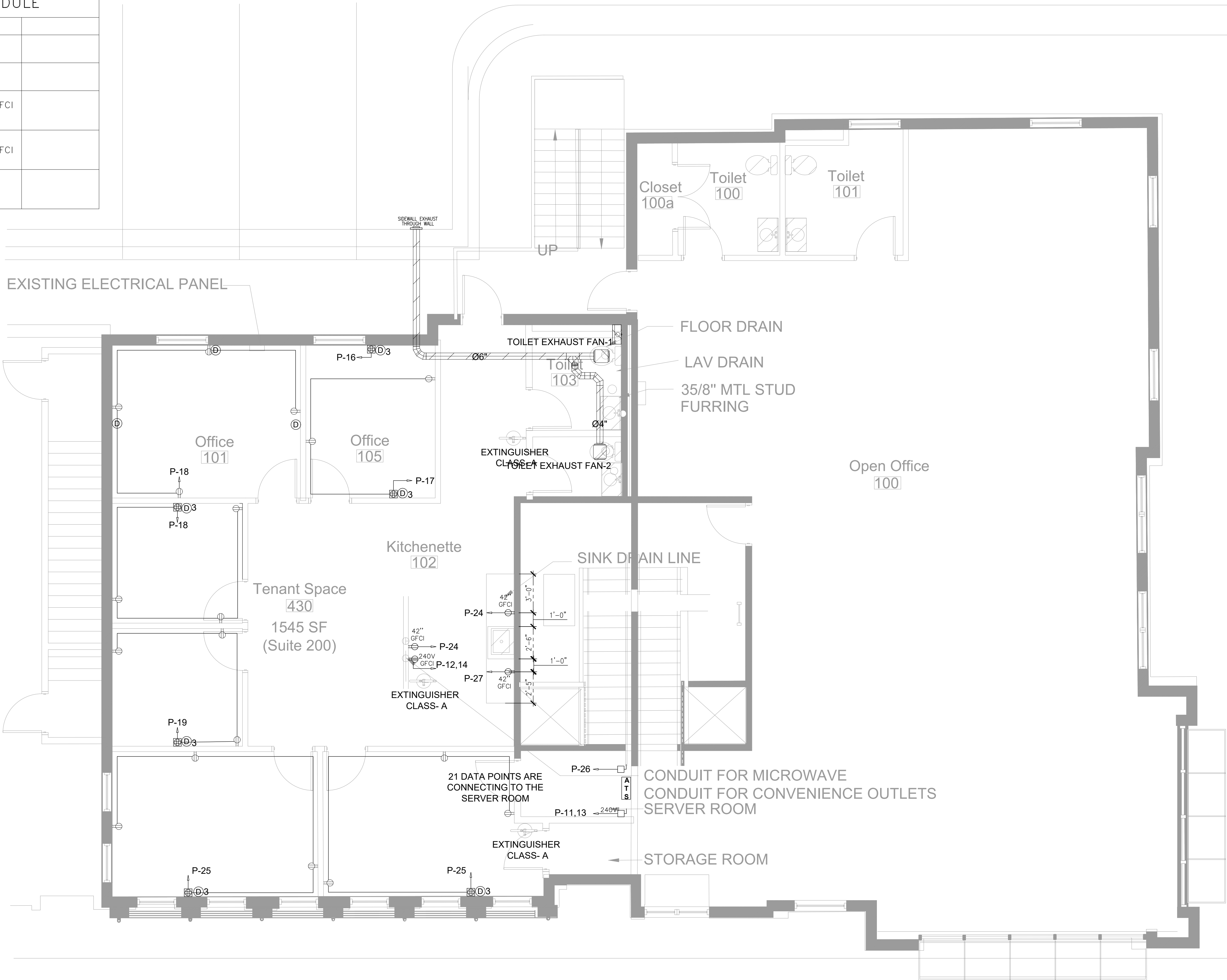
FIRST FLOOR POWER OUTLET SCHEDULE			
SL.	LEGEND	DESCRIPTION	
1		24"X48" RECESSED LIGHT	
2		RECESSED DOWNLIGHT	
3		SINGLE POLE SWITCH	
4		EMERGENCY LIGHT WITH EXIT SIGN	



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

SHEET:	E-3	SHEET TITLE: ELECTRICAL LIGHTING PLAN	ISSUE RECORD		STAMP:	Date: 02/28/2024 Scale: 1/4" = 1' Drawn By: S.J. Page:
			DATE:	COMMENTS:		
LOT 7, BUILDING 31 430 SW LONGVIEW BLVD, Ste 200 LEE'S SUMMIT, MO, 64081						

FIRST FLOOR POWER OUTLET SCHEDULE			
SL.	LEGEND	DESCRIPTION	
1		DOUBLE DUPLEX RECEPTACLE - 120V	
2		DATA POINTS	
3		DUPLEX RECEPTACLE - 120V - WITH GFCI AT SPECIFIED HEIGHT	
4		DUPLEX RECEPTACLE - 240V - WITH GFCI	
5		SWITCHED DISCONNECT-240V	



ELECTRICAL POWER PLAN
1/4" = 1'-0"

SHEET:	E-4	SHEET TITLE: ELECTRICAL POWER PLAN	ISSUE RECORD	STAMP:		Date: 02/28/2024 Scale: 1/4" = 1' Drawn By: S.J. Page:
				DATE:	COMMENTS:	
			ISSUED FOR:		LOT 7, BUILDING 31 430 SW LONGVIEW BLVD, Ste 200 LEE'S SUMMIT, MO, 64081	
			Drawing File:		10-28-2023 11:00 AM LONGVIEW BLVD	

MECHANICAL LEGEND					
SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
		COORDINATE WITH ELECTRICAL			LINED DUCTWORK (OR PLENUM)
	CD	CONDENSATE DRAIN (A/C)			DUCT RISE IN DIRECTION OF FLOW
	D	DRAIN			DUCT DROP IN DIRECTION OF FLOW
	RD	REFRIGERANT DISCHARGE			ROUND DUCT UP
	RL	REFRIGERANT LIQUID			ROUND DUCT DOWN
	RS	REFRIGERANT SUCTION			SUPPLY DUCT UP
		PIPE DOWN			SUPPLY DUCT DOWN
		PIPE UP		RA/OA	RETURN AIR DUCT/OUTSIDE AIR DUCT UP
		PIPE RISE (OR DN. FOR DROP)			RETURN AIR DUCT/OUTSIDE AIR DUCT DOWN
		DIRECTION OF FLOW IN PIPE			EXHAUST AIR DUCT UP
	AV	AIR VENT (VALVE)			EXHAUST AIR DUCT DOWN
	CHV	CHECK VALVE			DUCT TRANSITION
	CV (2W)	CONTROL VALVE (2-WAY)		CD	CEILING DIFFUSER
	CV (3W)	CONTROL VALVE (3-WAY)		CR	CEILING REGISTER
	FCD	AUTOMATIC FLOW CONTROL DEVICE		ER	EXHAUST REGISTER
	SOV	SHUT OFF VALVE		T'STAT	THERMOSTAT OR TEMPERATURE SENSOR (NUMBER INDICATES EQUIPMENT OR ZONE SERVED)
		GLOBE/BALL/BUTTERFLY VALVE		H'STAT	HUMIDISTAT
	BV	COMBINATION BALANCING & SHUT-OFF VALVE			CARBON DIOXIDE SENSOR
	FEV	FLOW ELEMENT VENTURI		CFM	CUBIC FEET PER MINUTE
		VALVE ON RISE OR DROP			SYMBOL, SEE EQUIPMENT SCHEDULE
	STR.	STRAINER			4-WAY SUPPLY AIR DIFFUSER
	CL	CAPPED LINE			4-WAY RETURN AIR GRILLE
	DN.	DOWN OR DROP			SUPPLY AIR DIFFUSER AIR DIRECTION
	UP	RISE OR RISER			SURFACE MOUNT SUPPLY AIR DIFFUSER
	RV	PRESSURE RELIEF VALVE			SURFACE MOUNT RETURN AIR GRILLE
	PG	PRESSURE GAUGE WITH BALL VALVE			SUPPLY AIR SIDEWALL DIFFUSER
	R.	ECCENTRIC REDUCER			RETURN AIR SIDEWALL GRILLE
	R.	CONCENTRIC REDUCER			VOLUME CONTROL DAMPER
	FC	FLEXIBLE CONNECTION (PIPE)			SUPPLY/EXHAUST AIR FAN
	PA	PIPE ANCHOR			TERMINAL TAG/ QTY, AIR QUANTITY (CFM)
	U	UNION			DOOR LOUVER
		DUCTWORK (1ST NUMBER INDICATES WIDTH SHOWN), NET INSIDE DIMENSION			UNDER CUT
	TV	SQUARE ELBOW WITH TURNING VANES			INTAKE/ EGRESS
		RADIUS ELBOW			DUCT HEATER
	MVD	MANUAL VOLUME DAMPER			WASHROOM VENTILATOR
	MOD	MOTOR OPERATED DAMPER			
	BDD	BACKDRAFT DAMPER			
	FD	FIRE DAMPER			
	SD	DUCT MOUNTED SMOKE DETECTOR			
	SFD	AUTOMATIC SMOKE AND FIRE DAMPER			
	FLEX	FLEXIBLE CONNECTION (DUCTWORK)			
	FLEX	FLEXIBLE CONNECTION OR SEISMIC JOINT			

MECHANICAL SPECIFICATIONS	
NO.	DESCRIPTION
A)	AIR CONDITIONING SPECIFICATION
1.	DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED FOR THE EXACT LOCATION OF EQUIPMENT, PIPING, DUCTWORK, OR OTHER ITEMS.
2.	DRAWINGS DO NOT SHOW EVERY DETAIL OF CONSTRUCTION OR INSTALLATION. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
3.	ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN A FIRST CLASS, WORKMAN-LIKE MANNER. THE COMPLETED SYSTEM SHALL BE OPERATIVE AND ACCEPTANCE BY ENGINEER/ARCHITECT SHALL BE A CONDITION OF THE SUB-CONTRACT.
4.	THE CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTS.
5.	THE CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL ASPECTS OF THE PROJECT AND SHALL VERIFY ALL CONDITIONS PRIOR TO CONSTRUCTION.
6.	ALL INSTALLATION SHALL BE COORDINATED BY THE CONTRACTOR WITH OTHER TRADES TO AVOID IMPACTS.
7.	ALL REQUIRED CONSTRUCTION INSURANCE FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR.
8.	ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, AND ORDINANCES.
9.	ALL MATERIALS SHALL BE NEW AND SHALL BEAR UNDERWRITERS LABEL WHERE APPLICABLE.
10.	EQUIPMENT SHALL BE U.L. APPROVED.
11.	THE MECHANICAL CONTRACTOR SHALL PROVIDE A WRITTEN WARRANTY THAT SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM THE DATE OF FINAL WORK ACCEPTANCE BY THE OWNER OR OWNERS REPRESENTATIVE.
12.	ARCHITECTURAL AND/OR ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REVISIONS OR SUBSTITUTIONS REQUESTED FOLLOWING THE ISSUE OF APPROVED DRAWINGS SHALL BE PAID FOR BY THE CONTRACTOR.
B)	INSTALLATION
1.	THE MECHANICAL CONTRACTOR SHALL PROVIDE HVAC EQUIPMENT LISTED IN THE HVAC EQUIPMENT SCHEDULE AND SHALL MEET THE CAPACITIES NOTED.
2.	THE MECHANICAL CONTRACTOR SHALL SUBMIT MANUFACTURER SHOP DRAWINGS, CUT SHEETS AND PERFORMANCE DATA ON ALL EQUIPMENT AND OBTAIN THE ENGINEER'S APPROVAL PRIOR TO PURCHASE AND INSTALLATION.
3.	THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MOTOR STARTERS, RELAYS, CONTRACTORS, SMOKE DETECTORS, ETC.
4.	THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES AND INSTALL ALL CONTROL WIRING.
5.	A/C UNIT SUPPLY AND RETURN AIR DUCTS SHALL BE R-6 JOHNS MANVILLE MAT-FACED MICRO-AIRE FIBERGLASS DUCT BOARD, TYPE 800 (UL APPROVED) , INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
6.	ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED TO S.M.A.C.N.A. STANDARDS. ALL DUCTWORK SIZES ARE INSIDE DIMENSIONS.
a)	ALL 90 DEGREE ELBOWS SHALL BE HAVE A MINIMUM CL RADIUS OF 1.5 R/W (1.5 R/D) OR BE FURNISHED WITH TURNING VANES.
b)	BRANCH TAKEOFFS SHALL BE PROVIDED WITH ADJUSTABLE, ACCESSIBLE AIR SPLITTER DAMPERS.
c)	ROUND DUCT ELBOWS SHALL HAVE A CENTERLINE RADIUS OF NOT LESS THAN 1.5 TIMES THE DIAMETER OF THE DUCT.
7.	SECURE FLEXIBLE DUCTS TO BRANCH TAKE-OFF COLLAR WITH HOSE CLAMP.
8.	MAXIMUM LENGTH OF ALL FLEXIBLE DUCT SHALL NOT BE MORE THAN 10 FEET, UNLESS OTHERWISE NOTED.
9.	ALL EXHAUST AND OUTSIDE AIR DUCT SHALL BE MIN. 24GA GALVANIZED SHEET METAL.
10.	ALL DUCT ABOVE THE ROOF TO BE MIN. 16GA SHEET METAL, INSULATED 2" ?THK RIGID HULL BOARD AND SHEATHED WITH GALV. STEEL EXTERIOR STEEL TO BE SEALED/WEATHERPROOFED, PRIMED AND PAINTED PER ARCHITECTURAL PAINT SCHEDULE.
11.	THE MECHANICAL CONTRACTOR SHALL INSTALL SMOKE DUCT DETECTORS IN THE RETURN DUCT OF ALL A/C UNITS EXCEEDING 2000 CFM. SMOKE DETECTOR SHALL BE INTERLOCKED W/ AHU CONTROLS.
12.	AIR DISTRIBUTION ACCESSORIES SHALL BE AS NOTED ON THE PLANS.
13.	REFRIGERANT PIPING SHALL BE TYPE "K" COPPER WITH SOLDER FITTINGS.
a)	ALL REFRIGERATION PIPE INSULATION SHALL BE MIN. 3/8"ARMAFLEX OR EQUAL APPROVED BY THE ENGINEER.
b)	ALL EXTERIOR LIQUID/SUCTION LINES SHALL BE INSULATED AND WEATHER PROOFED. ALL SUCTION LINES INSIDE THE BUILDING SHALL BE INSULATED.
c)	LIQUID/SUCTION LINES SHALL BE ROUTED INSIDE THE STRUCTURE TO THE EXTENT PRACTICABLE.
d)	THE MECHANICAL CONTRACTOR SHALL SIZE ALL PIPING FOR THE SPECIFIC APPLICATION AND ROUTE OF PIPE.
14.	THE MECHANICAL CONTRACTOR SHALL ROUTE CONDENSATE PIPING FOR A LENGTH OF 10 FEET TO A DRAIN SUPPLIED BY THE PLUMBING CONTRACTOR. THE MECHANICAL CONTRACTOR'S CONDENSATE PIPE SHALL INCLUDE A TRAP SIZED FOR AHU FAN STATIC.
15.	THE MECHANICAL CONTRACTOR SHALL SET AIR HANDLER UNIT AND HEAT PUMP UNIT AS SHOWN ON THE DRAWINGS. EQUIPMENT SHALL BE PROVIDED DIM PAD ISOLATORS.
16.	ALL OUTDOOR AIR INTAKES SHALL BE PROVIDED WITH BIRD AND INSECT SCREEN OF A CORROSION-RESISTANT MATERIAL. BIRD SCREEN SHALL NOT BE LARGER THAN 1/2" MESH AND INSECT SCREEN SHALL NOT BE LARGER THAN 18X14.
17.	THERMOSTATS SHALL BE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR:
a)	SHALL BE MOUNTED 5'-6' ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE.
b)	SHALL BE HEAT/OFF/COOL AND FAN/AUTO/ON SWITCHED AND SHALL BE APPROVED BY AC EQUIPMENT MANUFACTURER.
c)	FURNISH AND INSTALL ALL TEMPERATURE CONTROLS, INCLUDING PROGRAMMABLE THERMOSTAT AND HUMIDISTAT CONTROLS.
18.	FIRE DAMPERS SHALL BE INSTALLED IN ALL DUCTS PENETRATING FIRE RATED ROOFS, CEILINGS AND BULKHEADS AS BY CODE. ACCESS DOORS FOR INSPECTION AND RESET SHALL BE PROVIDED AT EACH LOCATION.
a)	FIRE DAMPERS PROVIDED IN KITCHEN EXHAUST DUCT SHALL BE EQUIPPED WITH 212F FUSIBLE LINK.
C)	WARRANTIES
1.	CORRECTION OF ANY ENGINEERING DEFECT SHALL BE RECTIFIED WITHOUT ADDITIONAL CHARGE AND SHALL NOT INCLUDE REPLACEMENTS OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREBY.
2.	CONTRACTOR SHALL ADJUST, TEST AND BALANCE ALL SYSTEMS.
a)	BALANCING OF THE SYSTEM SHALL BE BY A CERTIFIED THIRD PARTY.

HVAC ABBREVIATIONS			
A	AMPERES	HZ	FREQUENCY
AC	AIR CONDITIONING	IN	INCH OR INCHES
AD	ACCESS DOOR	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	LG	LENGTH
AL	ACOUSTICAL LINING	LAT	LEAVING AIR TEMPERATURE
BHP	BRAKE HORSEPOWER	LBS	POUNDS
BTU	BRITISH THERMAL UNIT	LDB	LEAVING DRY BULB TEMPERATURE
BTUH	BTU PER HOUR	LIN FT	LINEAR FEET
CD	CEILING DIFFUSER	LWB	LEAVING WET BULB TEMPERATURE
CFM	CUBIC FEET PER MINUTE	MAX	MAXIMUM
CG	CEILING GRILLE	MBH	THOUSAND BTU PER HOUR
CLG	CEILING	MHP	MOTOR HORSEPOWER
COMPR	COMPRESSOR	MIN	MINIMUM
CR	CEILING REGISTER	NIC	NOT IN CONTRACT
DB	DRY BULB	NO.	NUMBER
DIAM	DIAMETER	NTS	NOT TO SCALE
DN	DOWN	RA	RETURN AIR
DWG	DRAWING	RM	ROOM
DX	DIRECT EXPANSION	RPM	REVOLUTIONS PER MINUTE
EAT	ENTERING AIR TEMPERATURE	SP	STATIC PRESSURE
EDB	ENTERING DRY BULB TEMPERATURE	SPEC	SPECIFICATION
EF	EXHAUST FAN	TEMP	TEMPERATURE
EWB	ENTERING WET BULB	TG	TOP GRILLE
EWT	ENTERING WATER TEMPERATURE	TV	TURNING VANES
F	DEGREES FAHRENHEIT	TYP	TYPICAL
FC	FLEXIBLE CONNECTION	W	WIDTH
FD	FIRE DAMPER	W/	WITH
FIN FL	FINISHED FLOOR	W/O	WITHOUT
FLA	FULL LOAD AMPERES	WB	WET BULB
FPM	FEET PER MINUTE	WMS	WIRE MESH SCREEN
FT	FEET		
HD	HEAD	SG	SUPPLY GRILLE
HR	HOUR	RG	RETURN GRILLE
MAU	MAKE UP AIR UNIT	SP	SMOKE PURGE

CODES ANALYSIS

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES

- 2023 NATIONAL ELECTRICAL CODE (NEC)
- 2021 UNIFORM MECHANICAL CODE (UMC)
- 2021 UNIFORM PLUMBING CODE (UPC)
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2021 INTERNATIONAL BUILDING CODE (IBC)
- 2021 INTERNATIONAL FIRE CODE (IFC)

DATE: 02/28/2024

Scale: 1/4" = 1'

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Page:

LOT 7, BUILDING 31

430 SW LONGVIEW BLVD, Ste 200

LEE'S SUMMIT, MO, 64081

STAMP:

ISSUE RECORD

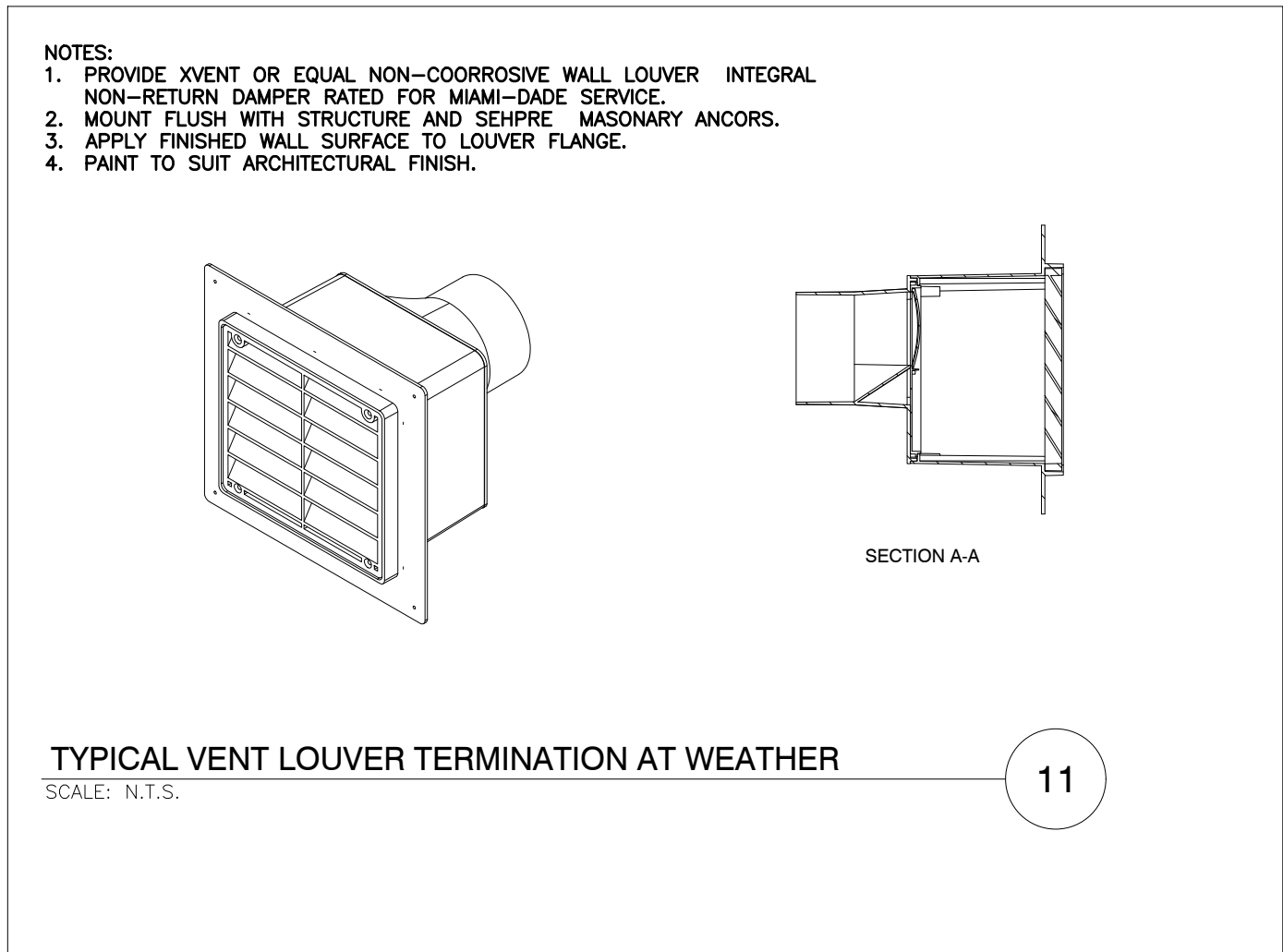
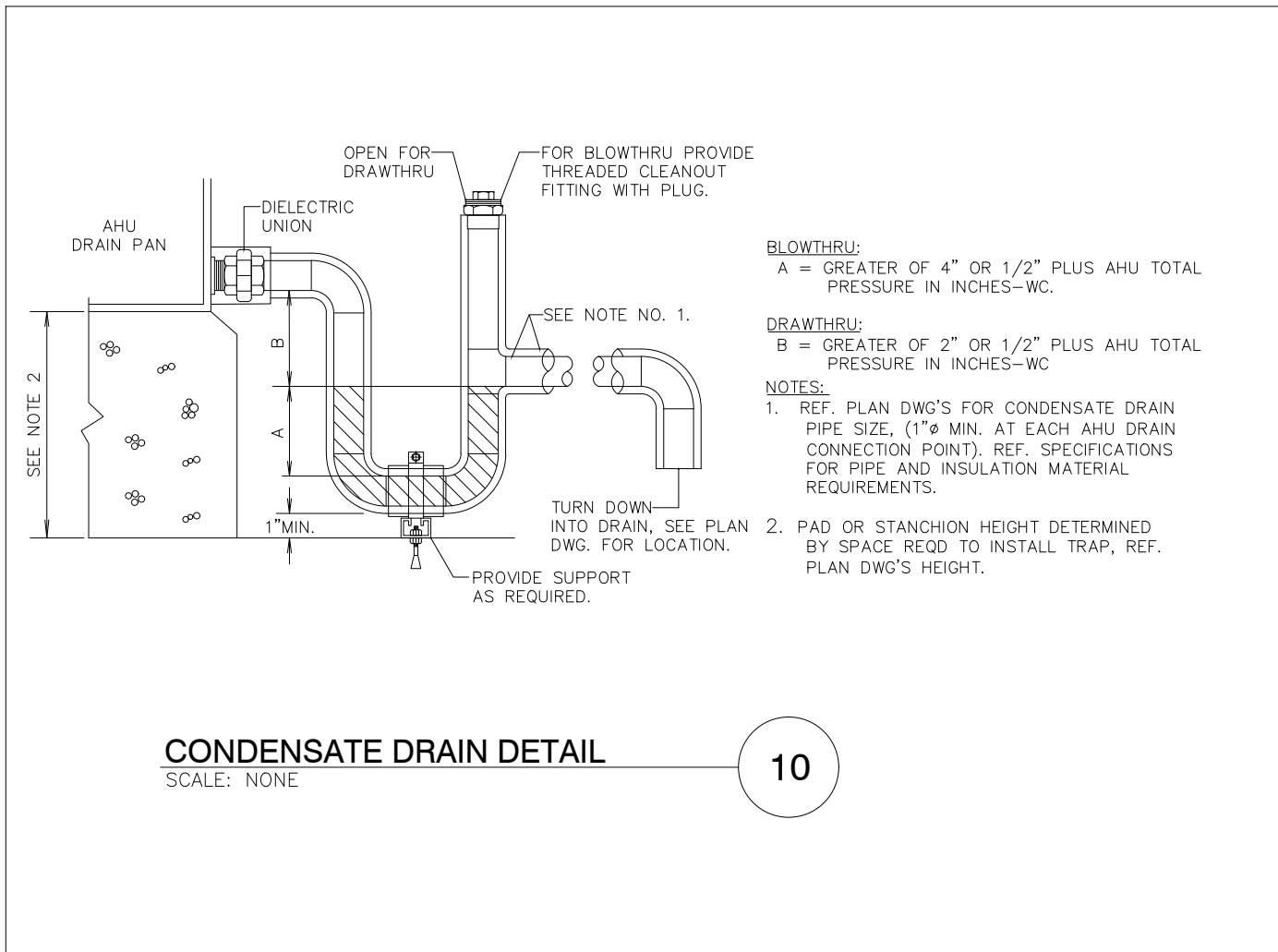
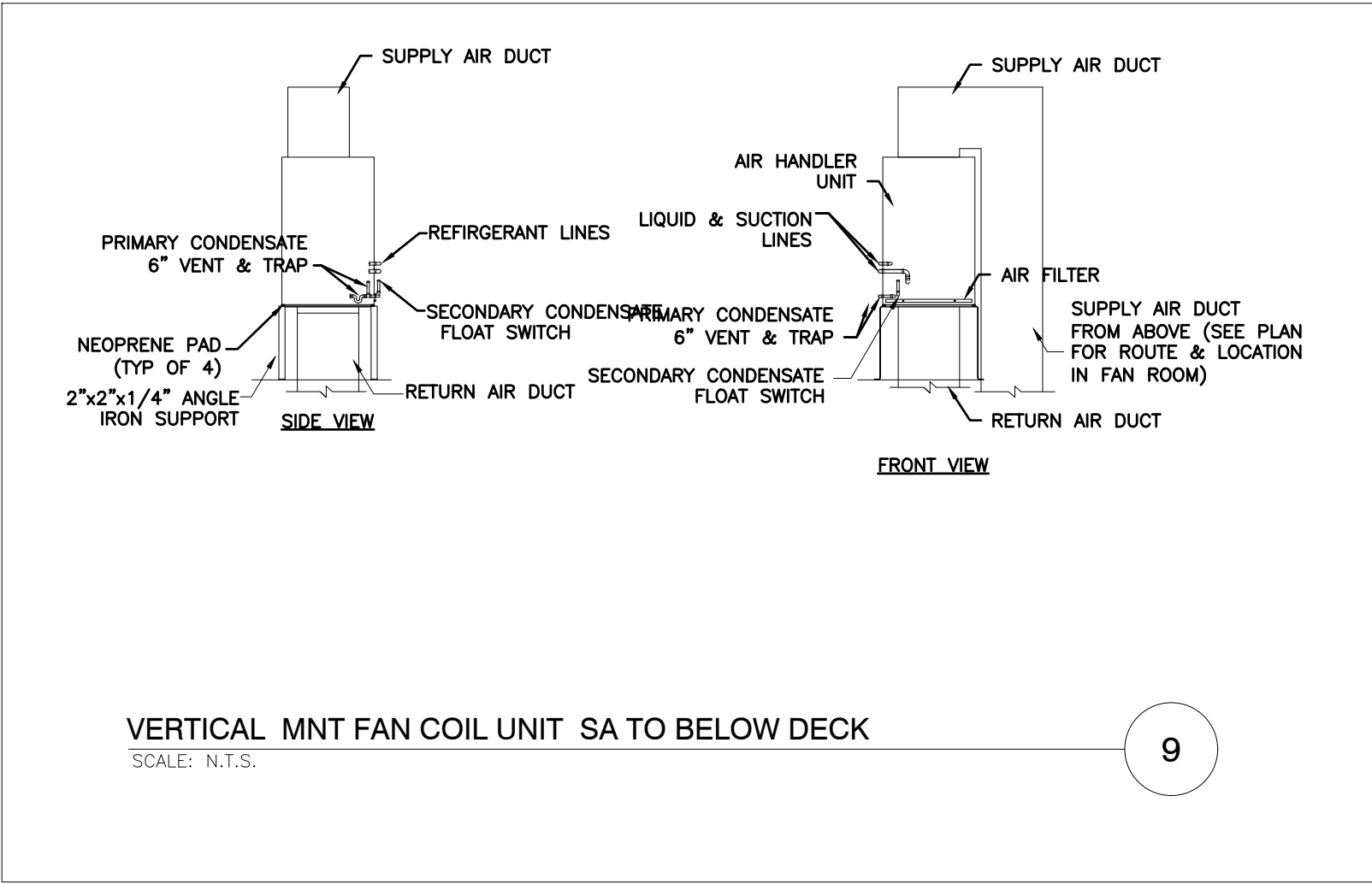
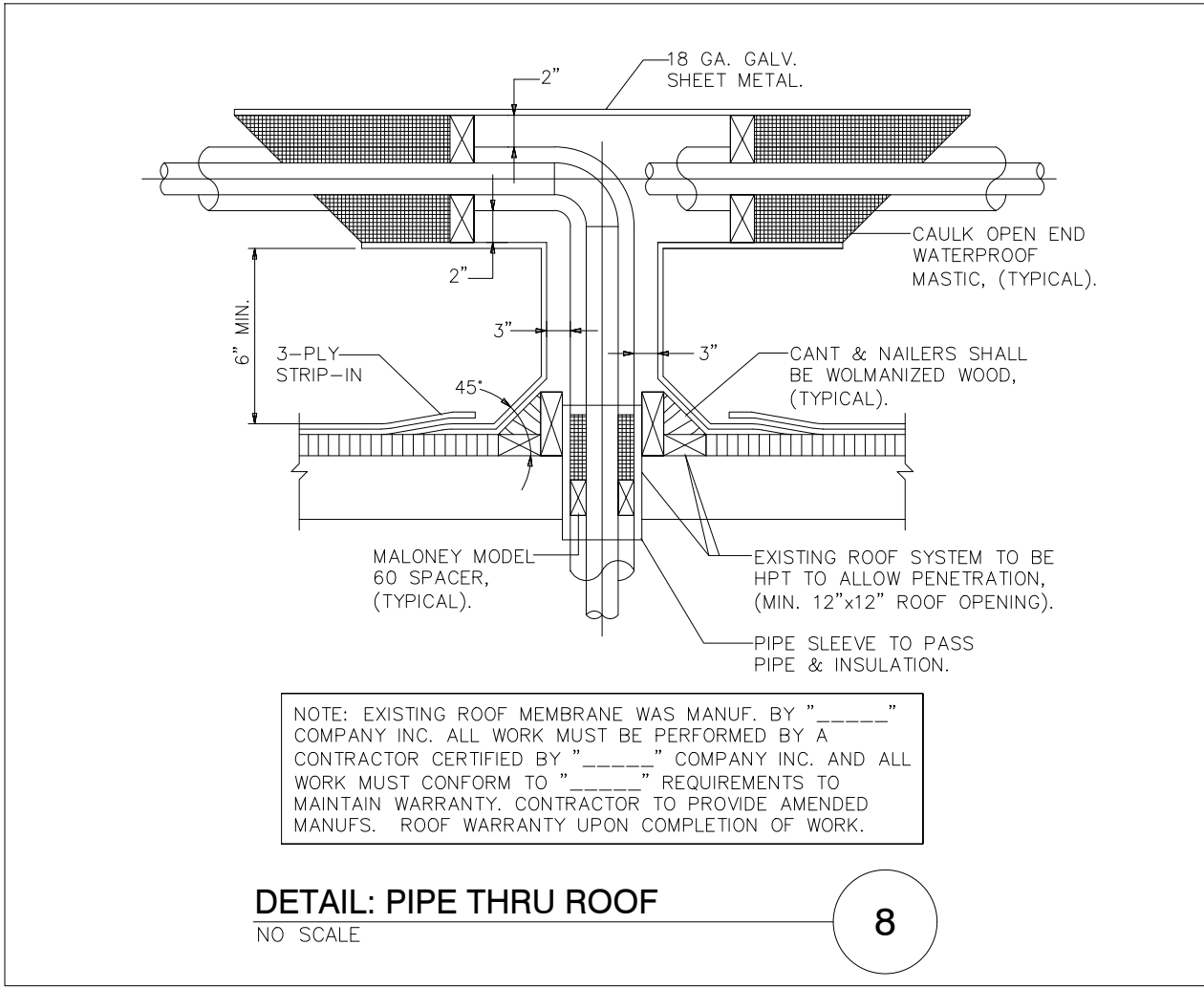
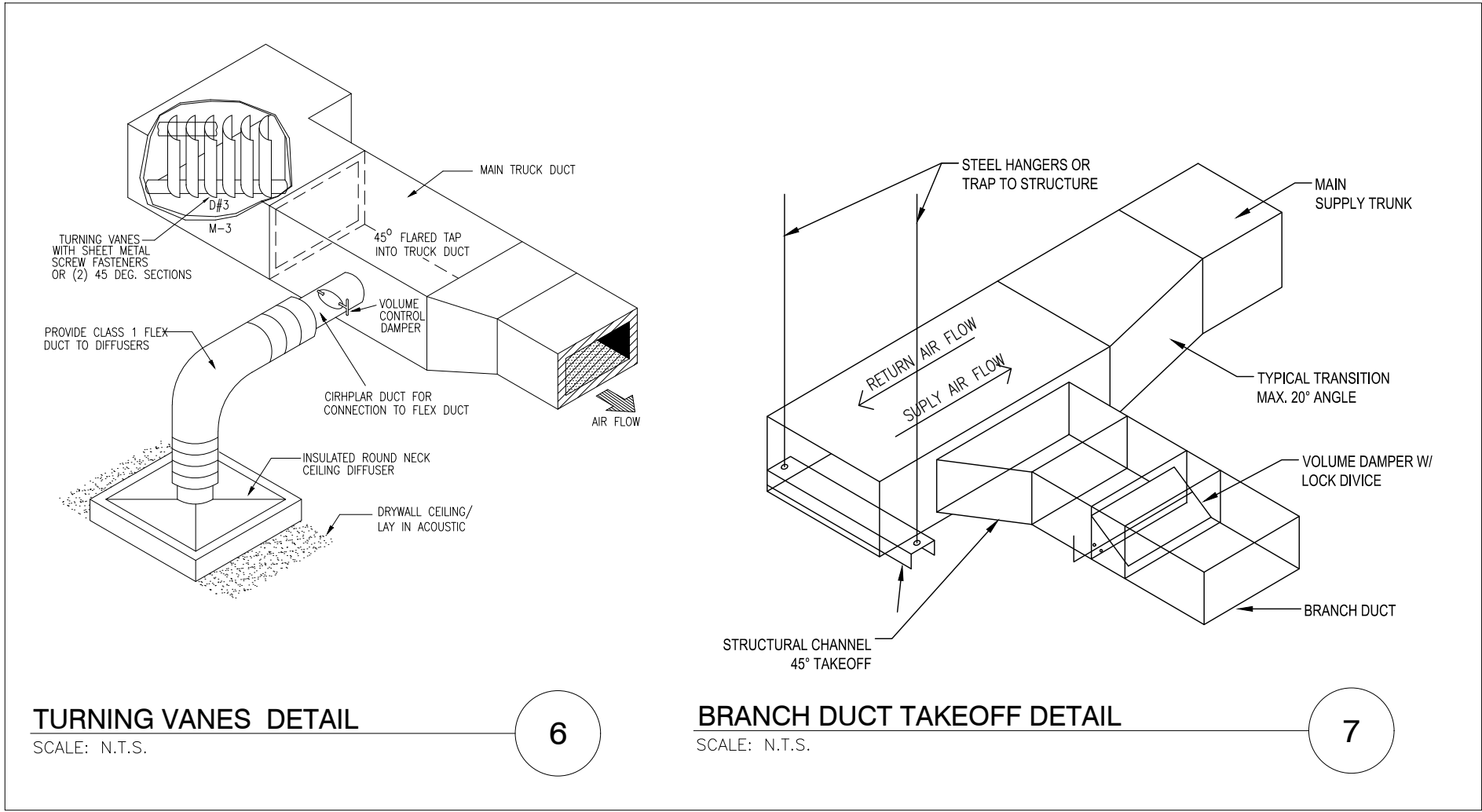
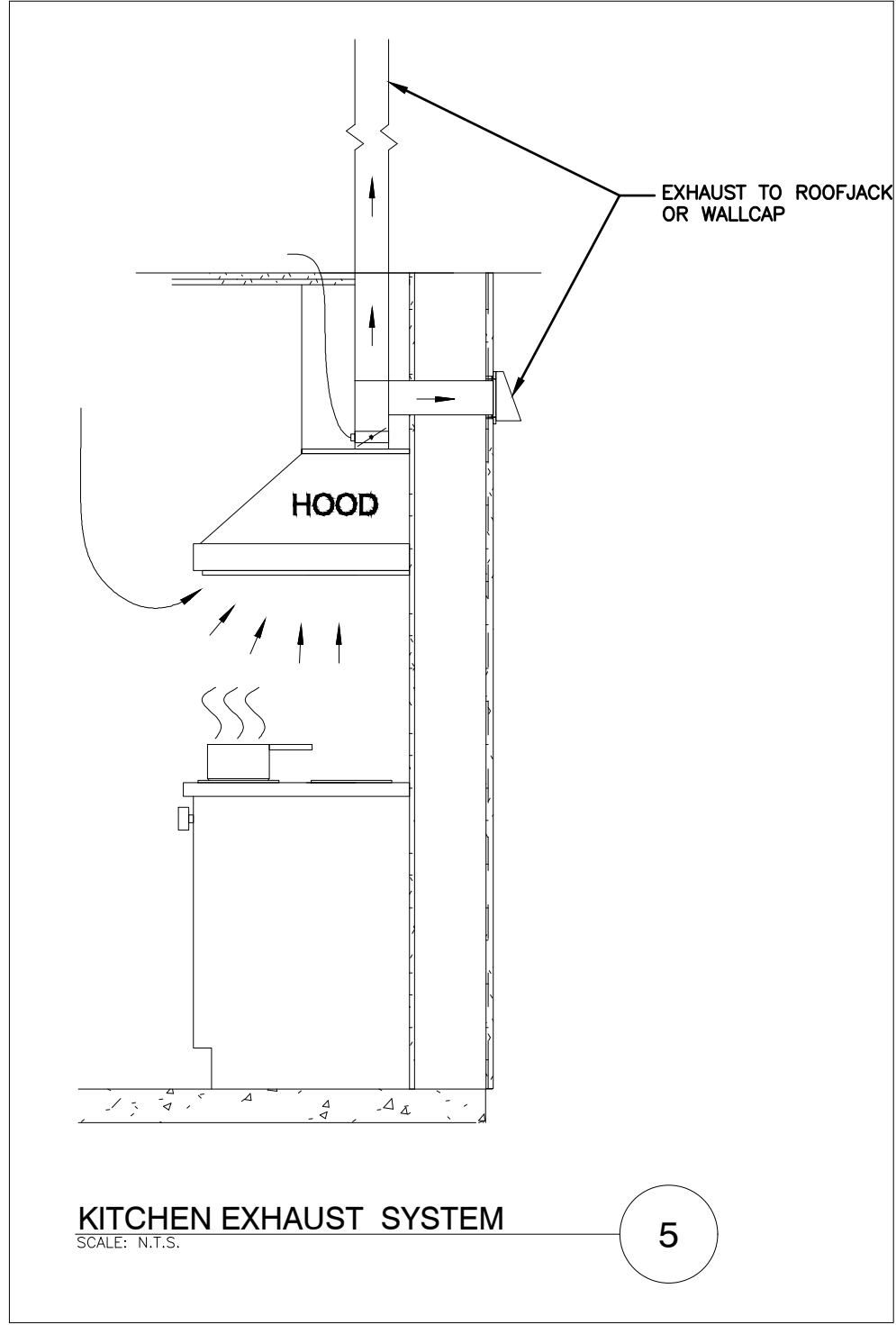
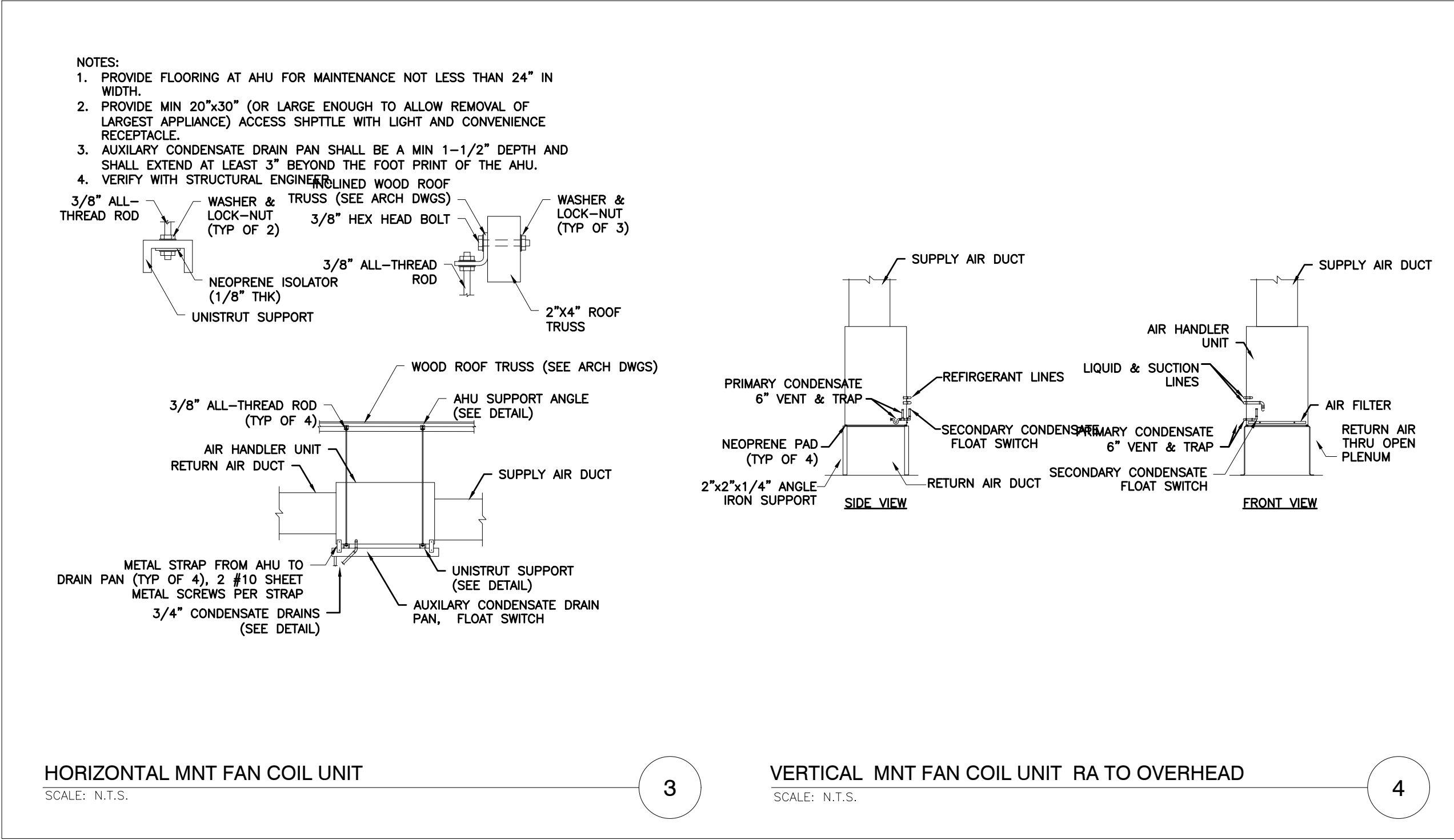
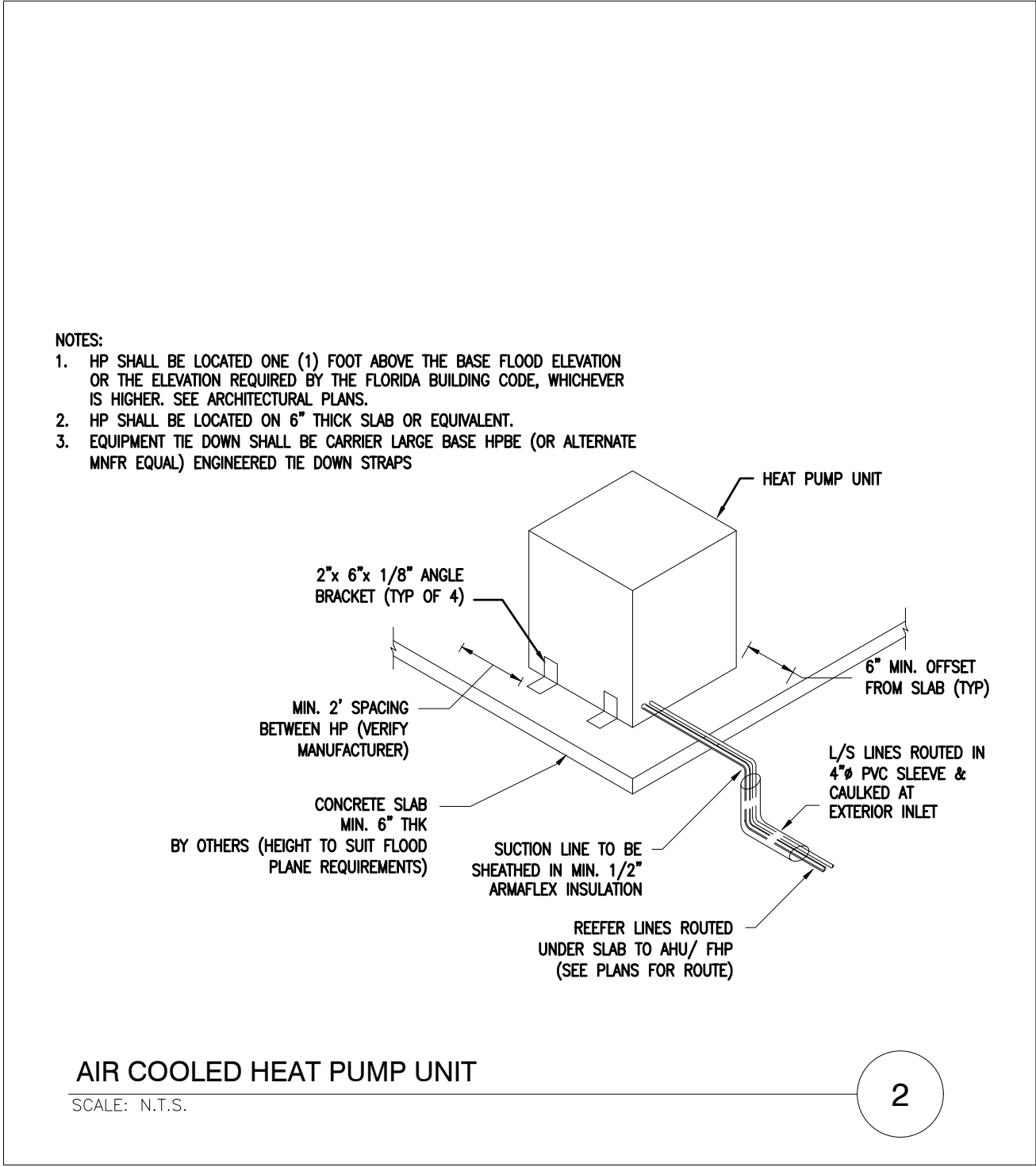
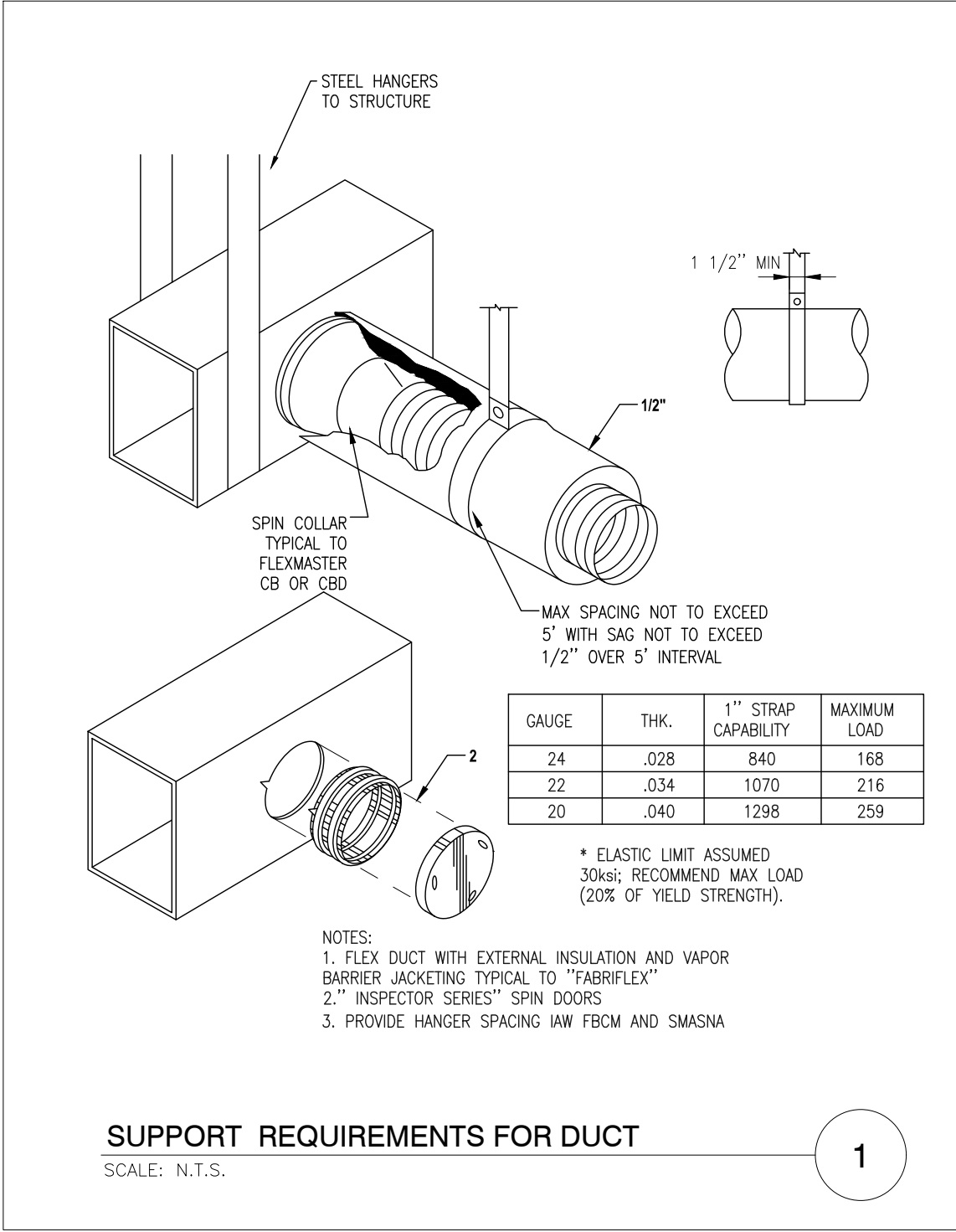
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SHEET TITLE:

MECHANICAL LEGENDS AND NOTES

M-1



GENERAL NOTES

PIPE SIZE/FU TDL:100'	
PIPE SIZE	MAX FU
1/2	5
3/4	17
1	33
1 1/4"	67
PIPE SIZE	MAX FU

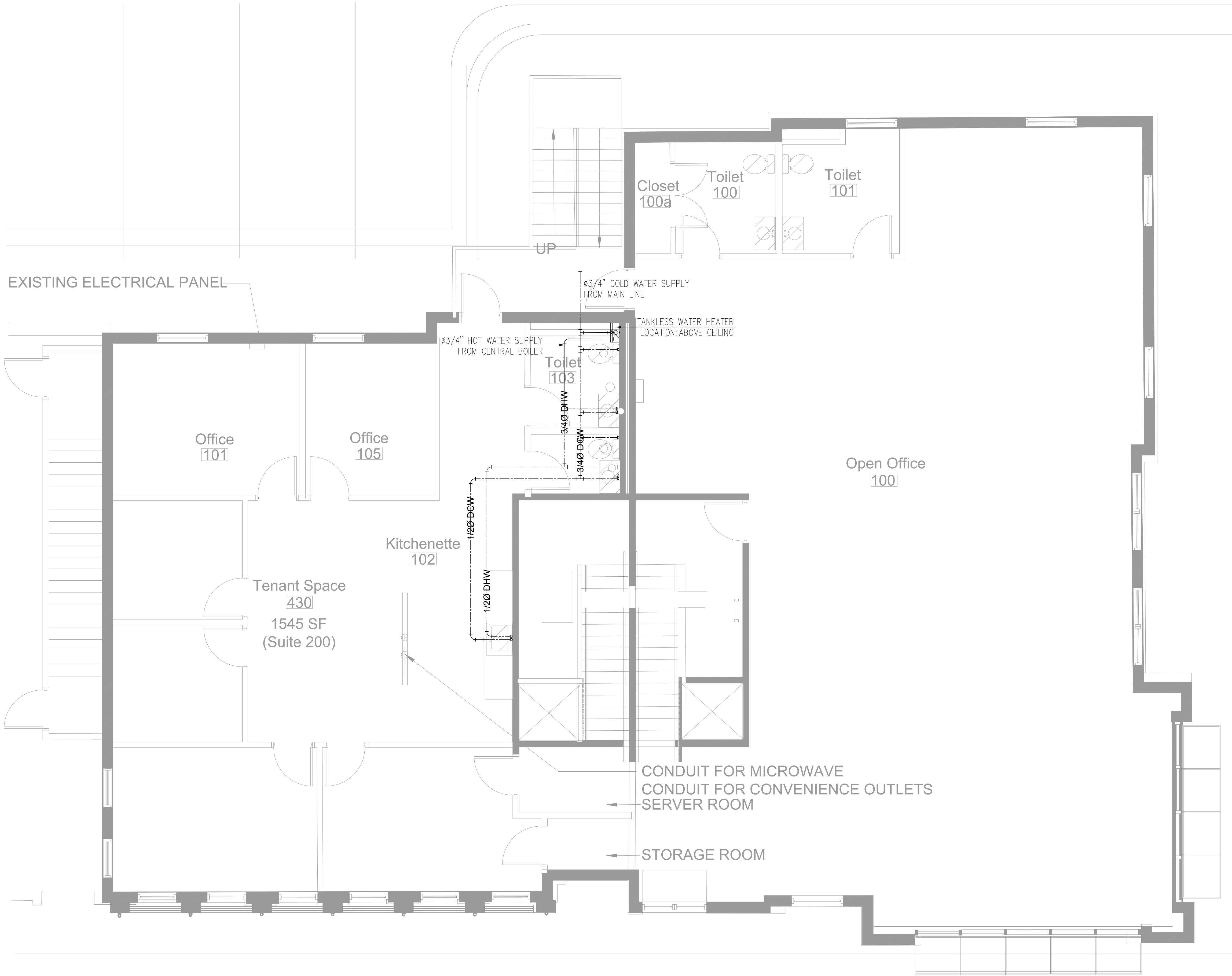
CODES ANALYSIS

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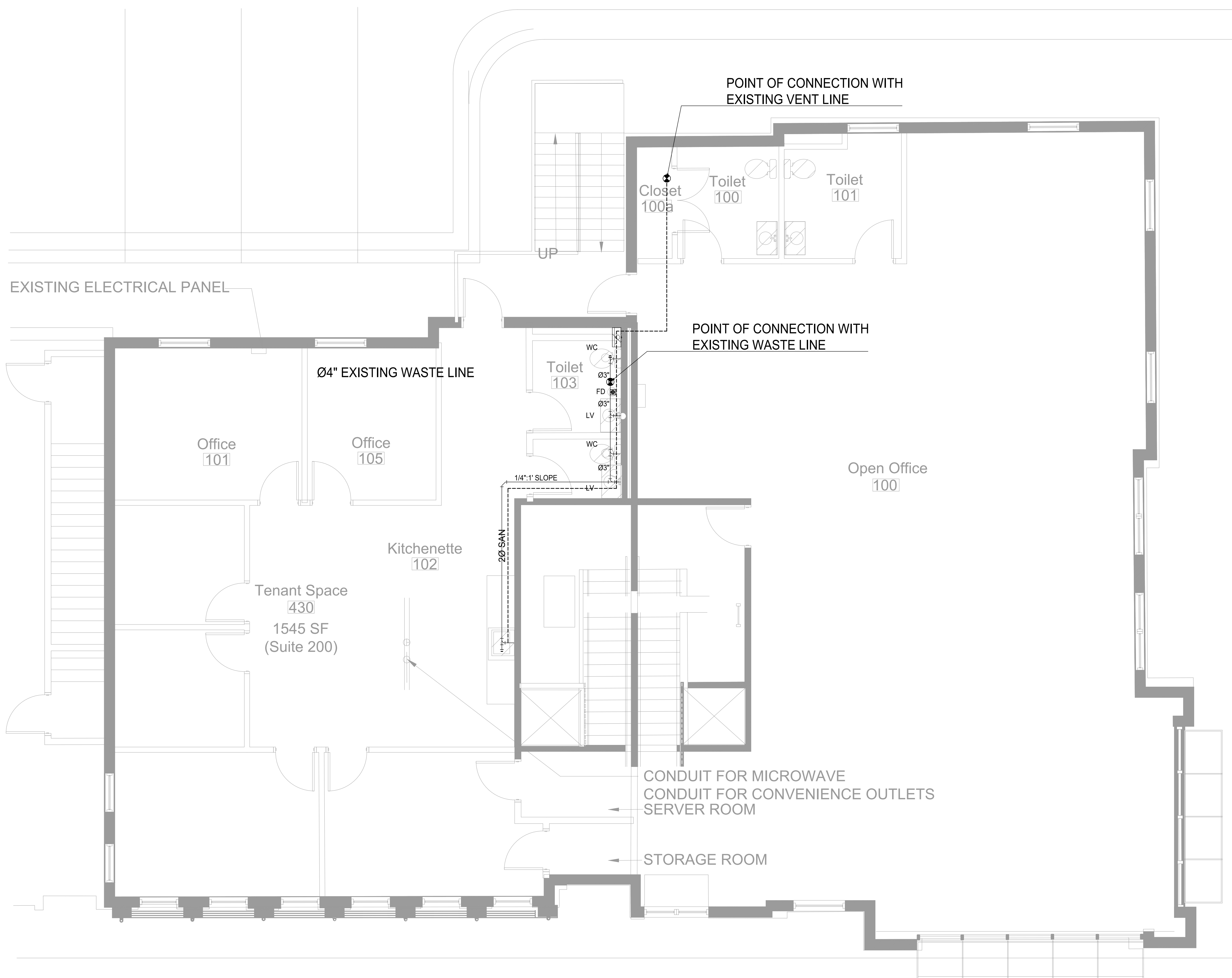
SERVICE	MATERIAL	THICKNESS	FIELD APPLIED JACKET	VAPOR RETARDER REQUIRED
DOMESTIC COLD WATER (IN EXTERIOR WALLS AND ATTIC) AND CONDENSATE DRAINS	MINERAL-FIBER WITH JACKET	ALL SIZES: 1/2"	NONE	YES
DOMESTIC HOT WATER WITHIN THE UNITS (NON-RECIRCULATED)	MINERAL-FIBER WITH JACKET, PREFORMED, TYPE-I,	RUNOUTS: 1/2" 1/2"-1 1/4" PIPE: 1"	NONE	YES
DOMESTIC, HOT AND RECIRCULATED WATER OPERATING TEMPERATURE: 105 TO 140 DEG F.	MINERAL-FIBER WITH JACKET	RUNOUTS: 1/2" 1/2"-1 1/4" PIPE: 1" 1 1/4"-6" PIPE: 1-1/2"	NONE	YES
HORIZONTAL RAINWATER CONDUCTORS	MINERAL-FIBER OR CELLULAR GLASS, WITH JACKET	ALL SIZES: 1/2"	FOIL AND PAPER	YES
ROOF DRAIN BODIES	MINERAL-FIBER OR CELLULAR GLASS, WITH JACKET	1"	NONE	YES
EXPOSED SANITARY DRAINS AND DOMESTIC WATER SUPPLIES AND STOPS FOR FIXTURES FOR THE DISABLED.	"LAV - GUARD" AS MANUFACTURE BY TRUEBRO	N/A	PVC P-TRAP AND SUPPLY COVERS	NO

SHEET:	P-1	SHEET TITLE:	PLUMBING LEGENDS, SCHEDULES AND CALCULATIONS	ISSUE RECORD			STAMP:				Date: 02/28/2024
				DATE:	ISSUED FOR:	COMMENTS:	LOT 7, BUILDING 31 430 SW LONGVIEW BLVD, Site 200 LEE'S SUMMIT, MO, 64081				
				Drawing File:	02-28-2024 1:08 SW		Page: S.J.				



WATER SUPPLY PLAN PLAN
1/4" = 1'-0"

SHEET:	P-2	SHEET TITLE: WATER SUPPLY PLAN	ISSUE RECORD		STAMP:	LOT 7, BUILDING 31 430 SW LONGVIEW BLVD, Ste 200 LEE'S SUMMIT, MO, 64081		Date: 02/28/2024
			DATE:	ISSUED FOR:				
			COMMENTS:					Scale: 1/4" = 1'
								Drawn By: S.J.
								Page:



DRAINAGE PLAN
1/4" = 1'-0"