

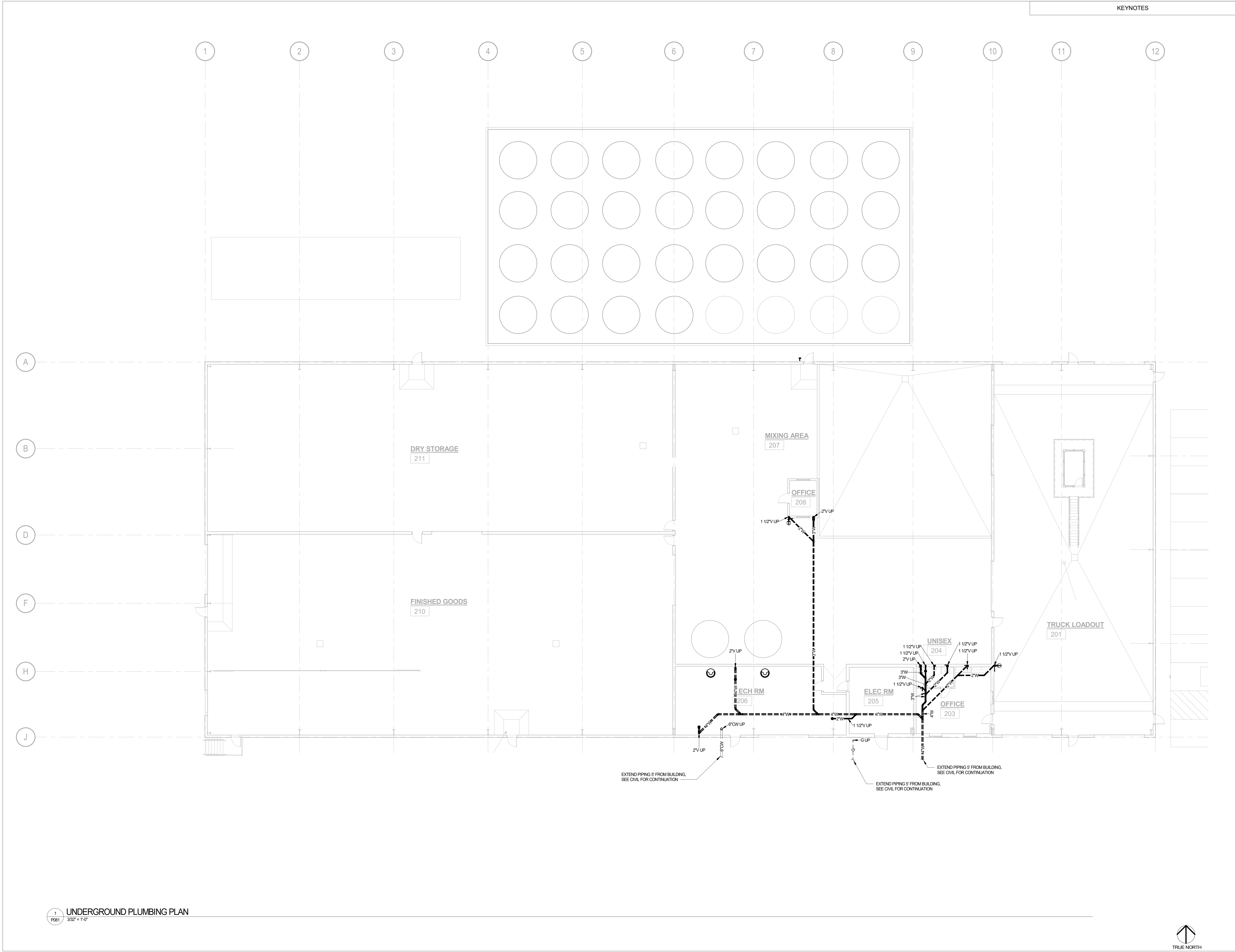
A		L	
AC	AIR COMPRESSOR	L	LONG
AIC	AIR CONDITIONING	LAT	LEAVING AIR TEMPERATURE
ADA	AREA DRAIN	LAV	LAVATORY
ADDL	ADDITIONAL	LB(S)	POUNDS
AF	AIR FLOW	LF	LINEAR FOOT, FEET
AFMS	AIR FLOW MEASURING STATION	LOC	LOCATIVE (LOCATION)
AHU	AIR HANDLING UNIT	LVL	LEVEL
ALT	ALTERNATE	LWR	LEAVING WATER TEMPERATURE
AMP	AMPERE	M	
AP	ACCESS PANEL	MA	MIXED AIR
APD	AIR PRESSURE DROP	MAT	MIXED AIR TEMPERATURE
APPROX	APPROXIMATELY	MATL	MATERIAL
ARCH	ARCHITECTURAL	MAU	MAKEUP AIR UNIT
AS	AIR SEPARATOR	MAX	MAXIMUM
AVG	AVERAGE	MB	MOP BASIN
B		MEH	THOUSAND BTUH
B	BOILER	MCC	MOTOR CONTROL CENTER
BFE	BOTTOM OF FOOTING ELEVATION	MED	MOTORIZED DAMPER
BFP	BACKFLOW PREVENTER	MECH	MECHANICAL
BFV	BUTTERFLY VALVE	MEZ	MEZZANINE
BHP	BREAK HORSEPOWER	MFR(C)	MANUFACTURE (ER) (ING)
BUILD	BUILDING	MISC	MISCELLANEOUS
BM	BEAM	MIN	MINIMUM, MINUTE
BMS	BUILDING MANAGEMENT SYSTEM	MS	MOP SINK
BSMT	BASEMENT	N	
BO	BOTTOM OF	NA	NOT APPLICABLE
BOF	BOTTOM OF FOOTING	NC	NOISE CRITERIA, NORMALLY CLOSED
BOS	BOTTOM OF STEEL	NC	NOT IN CONTRACT
BTU	BRITISH THERMAL UNIT	N.O.	NORMALLY OPEN
BTUH	BRITISH THERMAL UNIT PER HOUR	NO	NITRIC OXIDE
BV	BALL VALVE	NO	NITROGEN DIOXIDE
BWV	BACKWATER VALVE	NTS	NOT TO SCALE
C		O	
CA	COMBUSTION AIR	O	OXYGEN
CD	CONDENSATE DRAIN	OA	OUTSIDE AIR
CF	CUBIC FEET	OC	ON CENTER
CFH	CUBIC FEET PER HOUR	OCH	ON CENTER HORIZONTAL
CFRD	CUBIC FEET PER MINUTE	OCV	ON CENTER VERTICAL
CH	CHILLER	OD	OUTSIDE DIAMETER
CHC	CIRCULATING	OF	OVERFLOW SCUPPER
CKT	CHECK VALVE	OPT	OPTION
CKV	CLEANOUT, CARBON MONOXIDE	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT, CARBON DIOXIDE	OST	OVERFLOW STORM DRAINAGE
COMB	COMBINATION	P	
CONC	CONCRETE	PACU	PACKAGED AIR CONDITIONING UNIT
COND	CONDENSATE	PCC	PRECAST CONCRETE
CONN	CONNECTED (ION)	PC	PUMPED CONDENSATE
CONT	CONTINUE (OUS) (ATION)	PD	PUMPED DISCHARGE
CONST	COORDINATE	PERIM	PERIMETER
COORD	COORDINATE	PH	PHASE
CORR	CORROSION	PIV	POST INDICATOR VALVE
CT	COOLING TOWER	PLBG	PLUMBING
CTRL	CONTROL	PROJ	PROJECT
CWB	CABINET UNIT HEATER	PRV	PRESSURE REDUCING VALVE (PRV)
CW	COLD WATER	PSI	POUNDS PER SQ. FT.
D		PSG	POUNDS PER SQUARE INCH
D	DEEP, DEPTH	PTAC	PACKAGED TERMINAL AIR CONDITIONING
dB	DEBELS	PVC	POLYVINYL CHLORIDE
DB	DRYBULBS	Q	
DBL	DOUBLE	QTY	QUANTITY
DDC	DIRECT DIGITAL CONTROL	R	
DEG	DEGREES	R	RADIUS
DEMO	DEMOLITION	RA	RETURN AIR
DEPT	DEPARTMENT	RAD	RADIATOR (ION)
DET	DETAIL, DOMESTIC EXPANSION TANK	RD	ROOF DRAIN
DIFF	DIFFUSER	REG	REGISTER
DIA	DIAMETER	REQ(D)	REQUIRED
DM	DIMENSION	REQM	REQUIREMENT
DPS	DIFFERENTIAL PRESSURE SENSOR	RET	RETURN
DISC	DISCONNECT	REV	REVISE (ED) (ION)
DIV	DIVIDE (ED) (DER) (SION)	RH	RELATIVE HUMIDITY
DMPR	DAMPER	RM	ROOM
DN	DOWN	Ri	RADON
DOC	DOCUMENT(S)	RPM	REVOLUTIONS PER MINUTE
DWG(S)	DRAWING(S)	RPZ	REDUCED PRESSURE ZONE VALVE
E		RTU	ROOFTOP UNIT
EA	EACH, EXHAUST AIR	R&R	REMOVE AND REPLACE
EAT	ENTERING AIR TEMPERATURE	S	
ECM	ELECTRONICALLY COMMUTATED MOTOR	S	SENSOR
ELEC	ELECTRIC	SA	SUPPLY AIR
ELEV	ELEVATOR	SAT	SOUND ATTENUATOR
EMER	EMERGENCY	SCHD	SCHEDULE
EMS	EMERGENCY MANAGEMENT SYSTEM	SCW	SOFTENED COLD WATER
ENGR	ENGINEER	SD	SMOKE DAMPER
EQ	EQUAL	SDT	SQUARE FEET
EQUIP	EQUIPMENT	SFD	SMOKE FIRE DAMPER
ESP	EXTERNAL STATIC PRESSURE	SK	SIMILAR
ET	EXPANSION TANK	SOG	SPECIALTY SINK
EWC	ELECTRIC WATER COOLER	SP	SLAB ON GRADE
EWI	ELECTRIC WATER HEATER	SPKLR	SPRINKLER
EWT	ENTERING WATER TEMPERATURE	SS	SQUARE
EX	EXISTING	STD	STANDARD
EXT	EXTERIOR	STRN	STRAINER
F		STRUC	STRUCTURAL
"F	FAHRENHEIT	SV	STACK VENT
F	FIRE PIPE, FIRE DAMPER	T	
FC	FAN COIL	T	THERMOSTAT
FCO	FLOOR CLEANOUT	TC	TEMPERATURE CONTROL
FCD	FAN COIL UNIT	TCC	TEMPERATURE CONTROL CONTRACTOR
FDO	FLOOR DRAIN	TD	TEMPERATURE DIFFERENCE
FDC	FIRE DEPARTMENT CONNECTION	TEMP	TEMPERATURE
FDR	FIRE DAMPER	TMW	TEMPERATURE MIXING VALVE
FDPV	FIRE DEPARTMENT VALVE	TS	TOP OF STEEL
FF	FINISHED FLOOR	TYP	TYPICAL
FFE	FINISHED FLOOR ELEVATION	U	
FLEX	FLEXIBLE	U	URINAL
FLR	FLOOR	UH	UNIT HEATER
FLS	FLAMMABLE LIQUID SEPARATOR	UNO	UNLESS NOTED OTHERWISE
FP	FIREPROOFING	V	
FFM	FEET PER MINUTE	V	VENT PIPE
FSP	FIRE STANDPIPE	VAC	VACUUM
FPFH	FIRE PUMP TEST HEADER	VAL	VALVE
FT	FOOT, FEET	VAV	VARIABLE AIR VOLUME
FTI	FOOTING	VB	VACUUM BREAKER
FTG	FEET OF HEAD	VF	VARIABLE FREQUENCY DRIVE
FTD	FINISHED FLOOR ELEVATION	VFD	VERY IN FIELD
FTR	FLOAT AND THERMOSTATIC TRAP	VOL	VOLUME
G		VSD	VARIABLE SPEED DRIVE
GA	GALVE	VTR	VENT THERU ROOF
GAL	GALLONS	W	
GALV	GALVANIZED	WC	WATER CLOSET
GC	GENERAL CONTRACTOR	WH	WATER HYDRANT, WATER HEATER
GPH	GALLONS PER HOUR	Y	
GPM	GALLONS PER MINUTE	YCO	YARD CLEANOUT
GRV	GRAVITY ROOF VENTILATOR	YH	YARD HYDRANT
GWH	GAS WATER HEATER	SYMBOLS	
GV	GATE VALVE	-	APPROXIMATE (LY)
GYP	GYPSUM	@	AT
H		~	ANGLE
H	HIGH, HUMIDIFIER, HUMIDISTAT	Δ	CENTERLINE
HB	HOSE BIB	#	DIAMETER
HP	HORSEPOWER, HEAT PUMP	#	NUMBER
HPU	HEAT PUMP UNIT	#	PER
HT	HEIGHT	⊥	PERPENDICULAR
HTG	HEATING	±	PHASE
HTR	HEATER	±	PLUS OR MINUS
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	J	
HX	HEAT EXCHANGER	JT	JOINT
HYD	HYDRAULIC	K	
HZ	HERTZ	KW	KILOWATT
I		KWH	KILOWATT HOUR
ID	INSIDE DIAMETER / DIMENSION	KS	KITCHEN SINK
IN (")	INCHES	SYMBOLS	
INSUL	INSULATE (ED)	-	APPROXIMATE (LY)
INT	INTERIOR	AT	AT
INV	INVERT ELEVATION	Δ	ANGLE
J		~	CENTERLINE
JT	JOINT	#	DIAMETER
K		#	NUMBER
KW	KILOWATT	#	PER
KWH	KILOWATT HOUR	⊥	PERPENDICULAR
KS	KITCHEN SINK	±	PHASE
		±	PLUS OR MINUS

REFERENCE SYMBOLS	
REFERENCE SYMBOLS INDICATE THAT ADDITIONAL INFORMATION CONCERNING THE PART OF THE WORK REFERENCED MAY BE FOUND AT THE LOCATION INDICATED BY THE SYMBOL AND AS DESCRIBED BELOW.	
DETAIL CALLOUT:	INDICATES DETAIL CALLOUT NUMBER
	INDICATES SHEET WHERE DETAIL CALLOUT IS DRAWN
DETAIL:	INDICATES AREA OF DETAIL CUT PARALLEL TO VIEW
	INDICATES AREA OF DETAIL CUT PERPENDICULAR TO VIEW
DETAIL PLAN OR ELEVATION:	INDICATES AREA OF ENLARGED PLAN OR ENLARGED ELEVATION
	INDICATES DETAIL NUMBER
DETAIL CALLOUT:	INDICATES DETAIL NUMBER
	INDICATES SHEET WHERE DETAIL IS DRAWN
BUILDING SECTION:	INDICATES BUILDING SECTION NUMBER
	INDICATES SHEET WHERE BUILDING SECTION IS DRAWN
WALL SECTION:	INDICATES WALL SECTION NUMBER
	INDICATES SHEET WHERE WALL SECTION IS DRAWN
EXTERIOR ELEVATION:	INDICATES EXTERIOR ELEVATION NUMBER
	INDICATES SHEET WHERE EXTERIOR ELEVATION IS DRAWN
INTERIOR ELEVATION (SINGLE):	INDICATES INTERIOR ELEVATION NUMBER
	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
INTERIOR ELEVATION (MULTIPLE):	INDICATES INTERIOR ELEVATION NUMBER
	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
NEW GRID LINES:	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
EXISTING GRID LINES:	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
	INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN
REVISION:	REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET
	REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET
REVISION CLOUD:	REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET
	REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET
KEYNOTE:	SEE CORRESPONDING NUMBERED KEY NOTE ON SHEET WHERE REFERENCE OCCURS
	SEE CORRESPONDING NUMBERED KEY NOTE ON SHEET WHERE REFERENCE OCCURS
ELEVATION LEVEL:	INDICATES FLOOR LEVEL
	INDICATES FLOOR LEVEL
EXISTING WALL TO REMAIN	INDICATES FLOOR LEVEL
	INDICATES FLOOR LEVEL
EXISTING WALL TO BE REMOVED	INDICATES FLOOR LEVEL
	INDICATES FLOOR LEVEL

MECHANICAL GENERAL NOTES	
1.	CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS. NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER.
2.	GENERAL NOTES, SYMBOLS LIST, AND DETAILS ARE APPLICABLE TO ALL DRAWINGS OF THIS SECTION.
3.	DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT THE INTENT TO SPECIFY OR SHOW EVERY OFFSET, FITTING, OR COMPONENT NECESSARY. HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO COMPLETE THE SYSTEMS BEING INSTALLED, TESTED AND MADE OPERATIONAL.
4.	CONTRACTORS SHALL REFER TO ARCHITECTURAL AND ALL OTHER DISCIPLINES DRAWINGS FOR DIMENSIONS AND OTHER GENERAL INFORMATION NECESSARY TO COMPLETE THE WORK.
5.	THE DOCUMENTS AND SPECIFICATIONS SHALL GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6.	PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS SHOWN, SPECIFIED, AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTORS. REMOVE ALL DEBRIS CAUSED BY THIS CONTRACTORS WORK DAILY.
7.	ALL MATERIALS, EQUIPMENT, AND METHODS OF INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE AND OTHER AUTHORITIES HAVING JURISDICTION.
8.	ADDRESS QUESTIONS REGARDING DRAWINGS TO ENGINEER IN WRITING BEFORE AWARD OF CONTRACT; OTHERWISE, ENGINEERS INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
9.	EACH CONTRACTOR SHALL GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION FOR THIS WORK.
10.	WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. PIPES, DUCTWORK, EQUIPMENT, AND ACCESSORIES SHALL BE INSTALLED AS TIGHT TO STRUCTURE AS POSSIBLE. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES AND DUCTWORK EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.
11.	EACH CONTRACTOR IS RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF ITS NEW WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER. PATCHING MATERIALS SHALL MATCH EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH-UP TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.
12.	PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT A COPY OF SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE ENGINEER FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED. AT LEAST TEN WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, FOR SUBMITAL REVIEW SHALL BE ALLOWED FOR ENGINEERS REVIEW.
13.	DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS, OR EQUIPMENT FOR THOSE SPECIFIED SHALL BE REQUESTED IN A SEPARATE LETTER IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO BID.
14.	MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY ASME AND AGA FOR INTENDED SERVICE.
15.	AS WORK PROGRESSES, MAINTAIN AND MARK-UP A COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE FOR THE DURATION OF THE CONTRACT. WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS SHALL BE RECORDED CLEARLY AND ACCURATELY, INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN. TURN OVER THE FINAL SET OF "AS BUILT" DRAWINGS TO OWNER AT THE CONCLUSION OF CONSTRUCTION. PROVIDE A COPY OF THE "AS BUILT" DRAWINGS TO THE ENGINEER OF RECORD.
16.	GUARANTEE WORK OF THIS CONTRACTOR IN WRITING FOR ONE YEAR FROM THE DATE OF OWNERS ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. PROMPTLY, COMPLETELY REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATIONS THAT DEVELOP DEFECTS WITHIN THIS PERIOD. PROMPTLY AND TO OWNERS SATISFACTION, CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENT UNDER GUARANTEE AT NO ADDITIONAL COST TO OWNER. SUBMIT WRITTEN GUARANTEE TO ARCHITECT AND OWNER BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERRUPTED TO LIMIT OWNERS RIGHTS UNDER LAW AND THIS CONTRACT.
17.	EACH RESPECTIVE CONTRACTOR SHALL COORDINATE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT, OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12" X 12" AND SHALL BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. ALL LOCATIONS SHALL BE CONFIRMED WITH ARCHITECT.
18.	CONTRACTORS SHALL FIRE STOP ALL PENETRATIONS THROUGH HORIZONTAL ASSEMBLIES, FIRE RATED WALLS OR PARTITIONS WITH UL RATED ASSEMBLIES WITH AN EQUAL UL RATED FIRE STOP. CONTRACTORS SHALL COORDINATE WITH GENERAL CONTRACTOR TO MAINTAIN CONSISTENT PRODUCT USAGE.
19.	DO NOT SUPPORT EQUIPMENT FROM CEILINGS. ALL SUPPORT SHALL COME FROM BUILDING STRUCTURE.
20.	PRODUCTS SUBMITTED AND APPROVED FOR USE THAT NECESSITATE CHANGES TO THE WORK OF OTHER TRADES OF CONTRACT SHALL BE COORDINATED AND ARRANGED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
21.	CONTRACTOR SHALL COORDINATE ITS RESPECTIVE CEILING MOUNTED EQUIPMENT WITH OTHER TRADE CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS.
22.	PRIOR TO ACCEPTANCE OF THE FACILITY, EACH RESPECTIVE CONTRACTOR SHALL ASSURE THAT ALL SYSTEMS SHALL BE TESTED, BALANCED, AND ARE OPERATED AS A DEMONSTRATION TO THE OWNER, OR THE OWNERS REPRESENTATIVE, THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEMS AND/OR PARTS CONFORM TO THE DESIGN INTENT.
PLUMBING GENERAL NOTES	
1.	PLUMBING INFORMATION IS NOT LIMITED TO THE PLUMBING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW CONDITIONS AND OBSTACLES.
2.	WATER PIPING SHALL NOT BE ROUTED IN OUTSIDE WALLS OR ON THE EXTERIOR SIDE OF THE BUILDING INSULATION ENVELOPE.
3.	ALL CW, HW, AND CHW PIPING, VALVES, ETC. SHALL BE INSULATED. INSULATION SHALL BE INSTALLED BY AN INSULATING CONTRACTOR.
4.	ANY AND ALL ALTERATIONS TO THE SYSTEM SHALL BE SUBMITTED TO THE ENGINEER IN WRITING PRIOR TO ANY CHANGES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES MADE WITHOUT ENGINEERS APPROVAL.
5.	FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES, SEE THE PLUMBING FIXTURE SCHEDULE INDICATED ON SHEET P001.
6.	ALL SHUTOFF VALVES SHALL BE ACCESSIBLE. DO NOT LOCATE ANY VALVES ABOVE DUCTWORK, ELECTRICAL CONDUIT, CABLE TRAYS, OR PIPES THAT WOULD MAKE THE VALVES INACCESSIBLE OR UNABLE TO VISUALLY SEE THE VALVE LOCATION. LOCATE THE BRANCH SHUTOFF VALVES AS CLOSE AS POSSIBLE TO THE BRANCH CONNECTION TO THE MAIN SERVICE WHILE MAINTAINING VALVE ACCESSIBILITY.
7.	PROVIDE ADDITIONAL PIPE LABELS AS REQUIRED ON THE DOMESTIC WATER AND SANITARY SERVICES WHERE PIPING IS LOCATED ABOVE DUCTWORK, ELECTRICAL CONDUIT, OTHER PIPING, OR CABLE TRAYS.
8.	ALL COLD AND HOT WATER PIPING TO BE A MINIMUM OF 1/2 INCH UNLESS OTHERWISE NOTED. ALL MINIMUM PIPE SERVICES SHALL BE EXTENDED TO EACH PLUMBING FIXTURE AS REQUIRED.
9.	DRAIN/ILE PIPING SYSTEM BY GENERAL CONTRACTOR.
10.	WHEN SAW CUTTING FLOORS FOR PIPING TRENCHES, CONTRACTOR SHALL PROVIDE BACKFILL FREE OF DISCARDED CONSTRUCTION MATERIAL AND DEBRIS. LOOSE EARTH FREE OF ROCKS, BROKEN CONCRETE, AND FROZEN CHUNKS SHALL BE USED AS BACKFILL MATERIAL. BACKFILL MATERIAL SHALL BE PLACED IN THE TRENCH IN 6 INCH LIFTS, TAMPED BETWEEN LIFTS, UNTIL THE CROWN OF THE PIPE IS COVERED BY 12 INCHES OF TAMPED EARTH, OR ACCORDING TO STATE AND LOCAL CODES.
11.	ALL VARIABLE FREQUENCY DRIVES FURNISHED UNDER DIVISION 21-23 SHALL BE MANUFACTURED BY THE SAME MANUFACTURER, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE.
FIRE SPRINKLER GENERAL NOTES	
1.	THE INSTALLATION OF SPRINKLER SYSTEMS SHALL BE PERFORMED BY A LICENSED AND EXPERIENCED CONTRACTOR REGULARLY ENGAGED IN THIS TYPE OF WORK.
2.	PRIOR TO INSTALLATION OF SPINKLER SYSTEMS THE CONTRACTOR SHALL COORDINATE WORK WITH THE GENERAL CONTRACTOR AND WITH THE OTHER TRADES TO AVOID INTERFERENCES AND DELAYS. NOTIFY THE ENGINEER OF ANY MAJOR CONFLICTS THAT CANNOT BE RESOLVED THROUGH NORMAL FIELD COORDINATION WITH OTHER TRADES.
3.	THIS CONTRACTOR SHALL REMOVE AND RELOCATE ALL EQUIPMENT AND PIPING WHICH INTERFERES WITH THE WORK OF OTHER TRADES AT THIS CONTRACTORS SOLE EXPENSE IF THIS CONTRACTORS WORK IS NOT COORDINATED PRIOR TO THE BEGINNING OF WORK.
4.	THE INSTALLATION OF SPRINKLER SYSTEMS SHALL BE IN ACCORDANCE WITH NFPA STANDARD 13, NFPA STANDARD 25, STATE, AND LOCAL CODES.
5.	THIS CONTRACTOR SHALL PROVIDE A COMPLETE FIRE PROTECTION SYSTEM, COMPLIANT WITH LOCAL CODES AND AUTHORITY HAVING JURISDICTION, INCLUDING PERMITS, INSPECTIONS, AND ALL COSTS.
6.	AVOID EXPOSED SPRINKLER PIPING IN FINISHED AREAS, EVEN IF IT MEANS A LONGER RUN.
7.	ALL STICKERS AND LABELS SHALL BE REMOVED FROM EXPOSED PIPING BEFORE THE COMPLETION OF ALL WORK.
8.	UPON COMPLETION OF THE INSTALLATION, THE SYSTEM WILL BE HYDROSTATICALLY TESTED AND FLUSHED, AS SPECIFIED IN NFPA STANDARD 13, AND MEET THE REQUIREMENTS OF THE LOCAL ADMINISTRATIVE AUTHORITY HAVING JURISDICTION.
9.	ALL VARIABLE FREQUENCY DRIVES FURNISHED UNDER DIVISION 21-23 SHALL BE MANUFACTURED BY THE SAME MANUFACTURER, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE.

PLUMBING AND FIRE PROTECTION SYMBOLS					
ABBR	SYMBOL	DESCRIPTION	ABBR	SYMBOL	DESCRIPTION
CW		COLD WATER	CO		END OF PIPE CLEANOUT
HW		HOT WATER (120° F)	FCO		FLOOR CLEANOUT
HW		HOT WATER (140°F)	WCO		WALL CLEANOUT
CHW		CIRCULATION HOT WATER (120°F)	YCO		YARD CLEANOUT
CHW		CIRCULATION HOT WATER (140°F)			
NPCW		NON-POTABLE COLD WATER			PIPE ANCHOR
NPHW		NOT-POTABLE HOT WATER			PIPE BREAK
SCW		SOFTENED COLD WATER			PIPE DOWN
					PIPE END CAP
AW		ACID RESISTANT WASTE ABOVE GROUND			PIPE GUIDE
AW		ACID RESISTANT WASTE UNDERGROUND			PIPE REDUCER
AV		ACID RESIDENT VENT			PIPE TEE DOWN
FW		FLAMMABLE WASTE ABOVE GROUND			PIPE TEE UP
FW		FLAMMABLE WASTE UNDERGROUND			PIPE UNION
FV		FLAMMABLE WASTE VENT			PIPE LIP
GW		GREASE WASTE ABOVE GROUND			
GW		GREASE WASTE UNDERGROUND			FLOW ARROW
GV		GREASE WASTE VENT			CONNECT TO EXISTING
ST		STORM DRAINAGE ABOVE GROUND			POINT OF DISCONNECT
ST		STORM DRAINAGE UNDERGROUND			
OST		OVERFLOW STORM DRAINAGE			BOILER DRAIN
W		SOIL OR WASTE ABOVE GROUND	HB		HOSE BIBB
W		SOIL OR WASTE UNDERGROUND	WH		WALL HYDRANT
PW		PUMPED SOIL OR WASTE ABOVE GROUND	YH		YARD HYDRANT
V		SANITARY VENT			
			AD		AREA DRAIN
C		COMBINATION DOMESTIC WATER & FIRE PROTECTION	FD		FLOOR DRAIN
F		FIRE PROTECTION	HD		HOPPER DRAIN
A		COMPRESSED AIR	ORD		OVERFLOW ROOF DRAIN
G		GAS PIPING (NATURAL GAS)	RD		ROOF DRAIN
LP		LIQUIDIZED PROPANE			
O		OXYGEN PIPING			
VAC		VACUUM LINE			
0W30		MOTOR OIL 0W30			
5W30		MOTOR OIL 5W30			
5W30D		MOTOR OIL 5W30D			
10W30		MOTOR OIL 10W30			
ATF		AUTOMATIC TRANSMISSION FLUID			
HYD		HYDRAULIC FLUID			
BAL V		BALANCING VALVE			
BFP		BACKFLOW PREVENTER			
BWV		BACK WATER VALVE			
BV		BALL VALVE			
BFV		BUTTERFLY VALVE			
CKV		CHECK VALVE			
		GAS COCK			
		GAS REGULATOR			
GV		GATE VALVE			
		METER			
		PRESSURE RELIEF VALVE			
PRV		PRESSURE REDUCING VALVE			
		PUMP			
RPZ		REDUCED PRESSURE ZONE VALVE			
		SHUTOFF VALVE			
STRN		STRAINER & STRAINER W/ SHUTOFF			
		THERMOMETER			
		THERMOSTATIC MIXING VALVE			
		VALVE IN VERTICAL PIPE			
FDC		FIRE DEPARTMENT CONNECTION			
FPFH		FIRE PUMP TEST HEADER			
					</

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1 UNDERGROUND PLUMBING PLAN
P081 3/32" = 1'-0"

KEYNOTES

BKV
GROUP

5
5

5 5 5
5 5 5
5 5 5

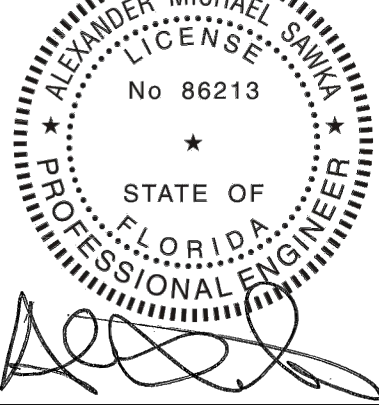
CONSULTANTS

PROJECT TITLE

AGROLIQUID
LIQUID
FERTILIZER
FACILITY LAKE
CITY, FL

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION

CERTIFICATION



Alexander Sawka	04/09/2025
86213	Date
License Number	
DRAWN BY	AMS
CHECKED BY	AMS
COMMISSION NUMBER	0000-00

SHEET TITLE

UNDERGROUND
PLUMBING PLAN

SHEET NUMBER

P081

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2
P101
LEVEL 1 PLUMBING PLAN
3/32" = 1'-0"



KEYNOTES

BKV
GROUP

5
5

5 5 5
5 5 5
5 5 5

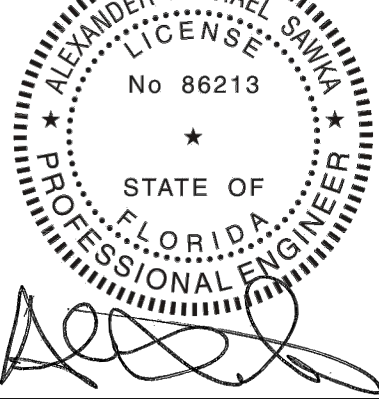
CONSULTANTS

PROJECT TITLE

AGROLIQUID
LIQUID
FERTILIZER
FACILITY LAKE
CITY, FL

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION

CERTIFICATION



Alexander Sawka
86213
License Number
Date
04/09/2025
DRAWN BY
AMS
CHECKED BY
AMS
COMMISSION NUMBER
0000-00

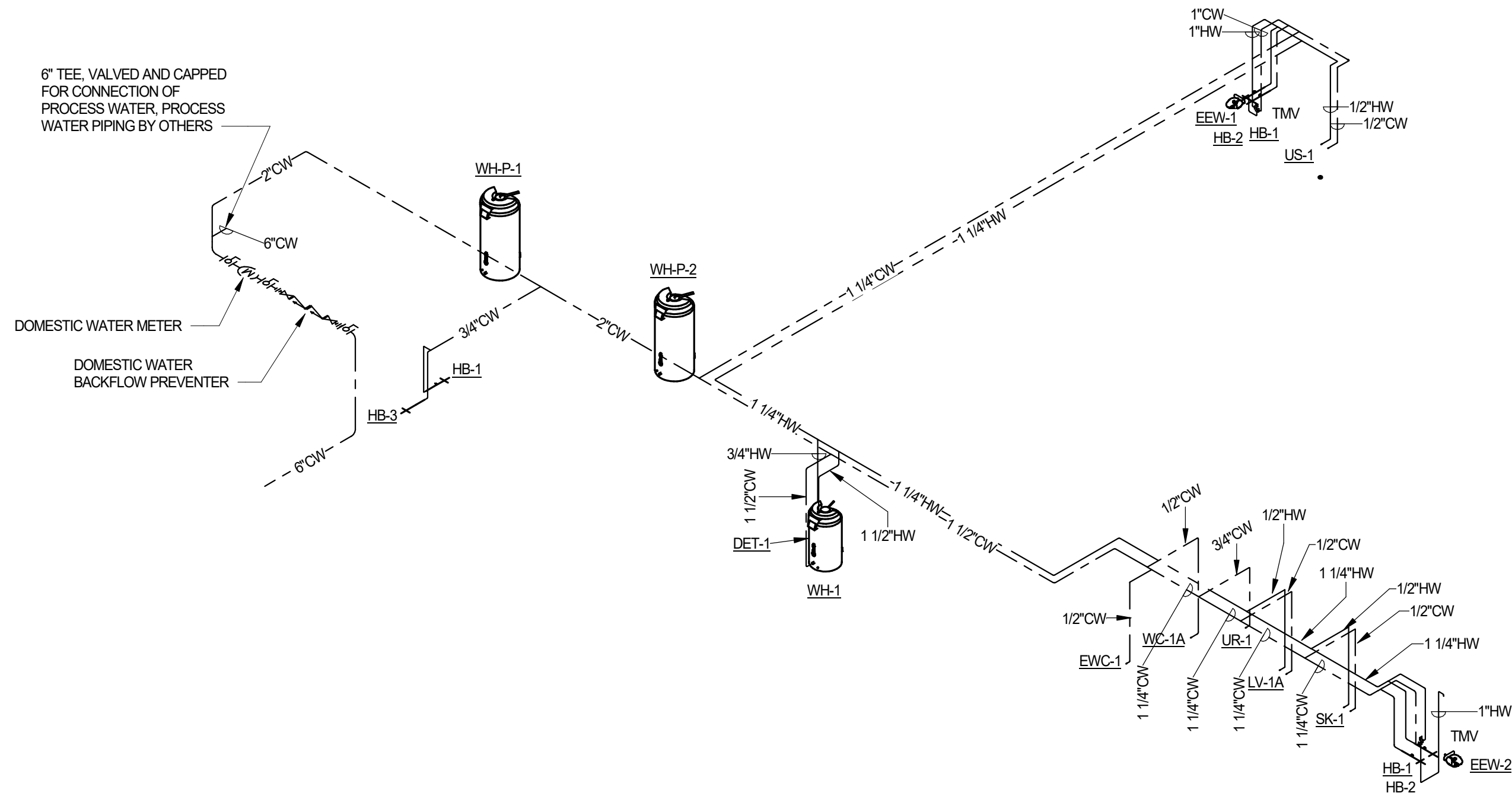
SHEET TITLE

LEVEL 1
PLUMBING PLAN

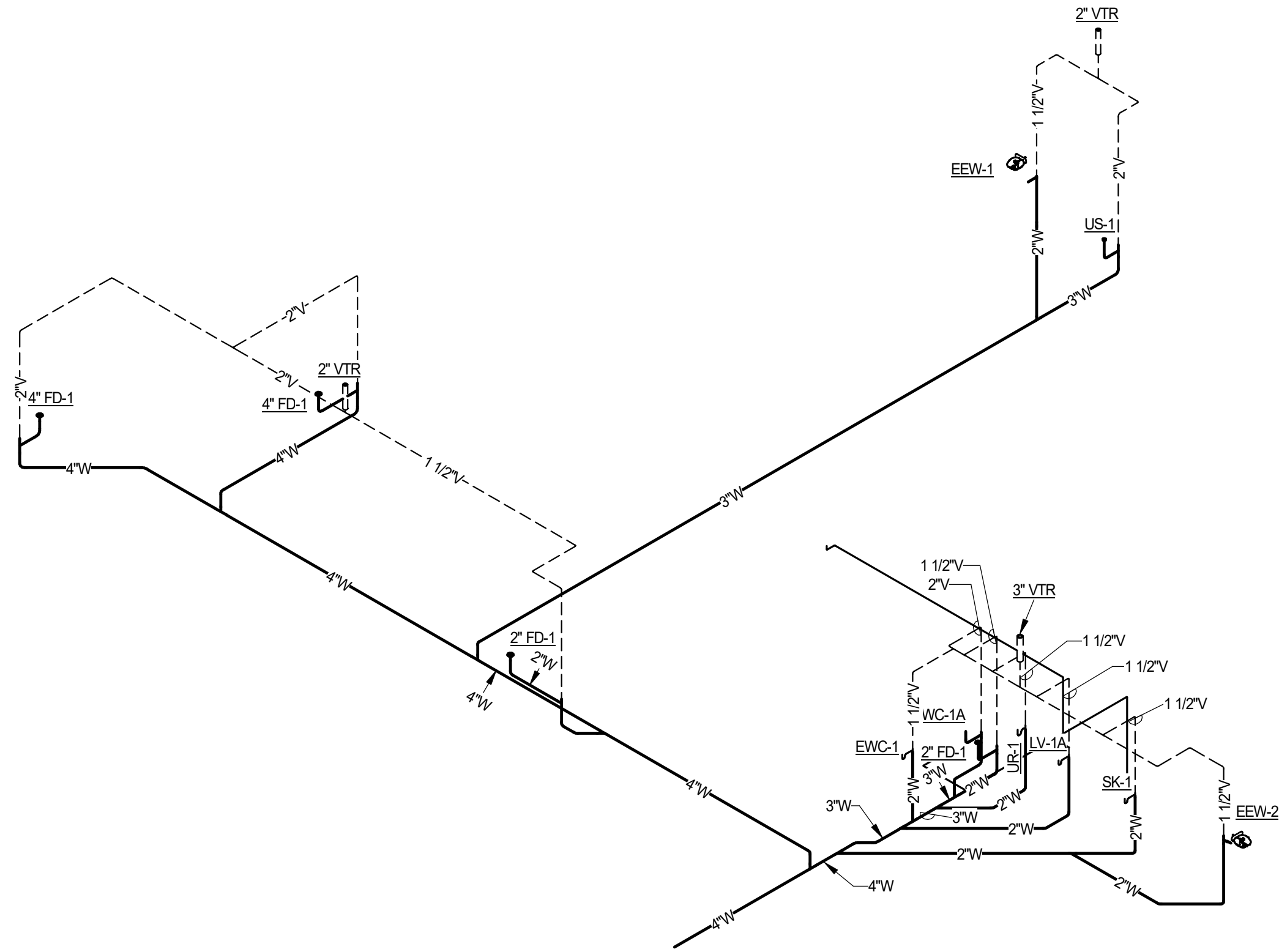
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P101

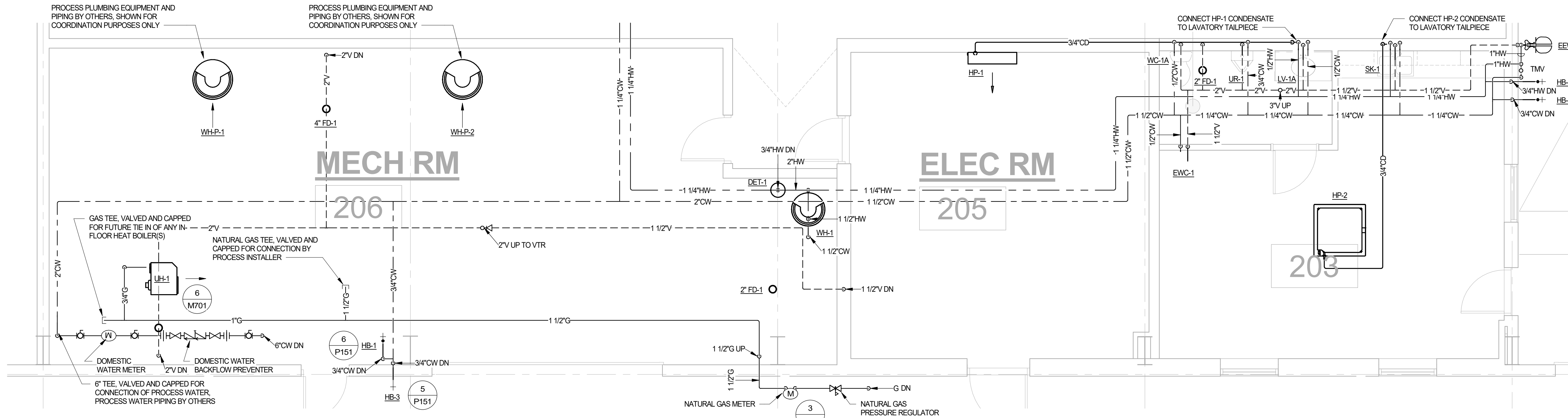
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1
P151
3D - DOMESTIC WATER



2
P151
3D - WASTE AND VENT



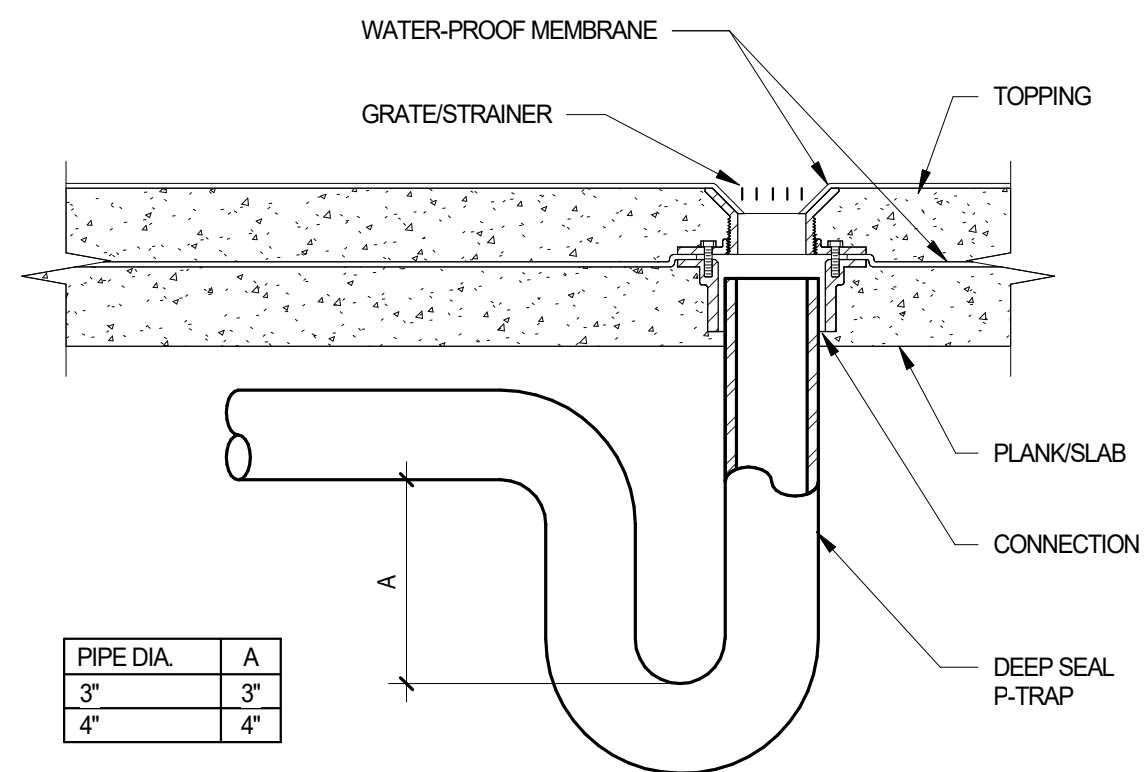
3
P151
ENLARGED PLUMBING PLAN
1/4" = 1'-0"

PLUMBING FIXTURE SCHEDULE										
FIXTURE NO.	FIXTURE TYPE	LOCATION	NOTES	MOUNTING HEIGHT	NOTE NUMBER	ROUGH-IN SIZES				
						WASTE	VENT	CW	HW	
EEW-1	EMERGENCY EYEWASH	MIXING AREA	FIXTURE: HAWS 839WC EMERGENCY EYEWASH STATION. ANSI Z358.1 COMPLIANT. BARRIER FREE. 11" ROUND BOWL. 3.7 GPM. OVERHEAD DRENCH SHOWERHEAD AT 20 GPM WITH RISER. ACCESSORIES: SEE DOMESTIC WATER HEATER SCHEDULE FOR ADDITIONAL INFORMATION.			1 1/2"	0"	0"	0"	
EEW-2	EMERGENCY EYEWASH	TRUCK LOADOUT	FIXTURE: HAWS 839WC EMERGENCY EYEWASH STATION. ANSI Z358.1 COMPLIANT. BARRIER FREE. 11" ROUND BOWL. 3.7 GPM. OVERHEAD DRENCH SHOWERHEAD AT 20 GPM WITH RISER. ACCESSORIES: SEE DOMESTIC WATER HEATER SCHEDULE FOR ADDITIONAL INFORMATION.			1 1/2"	0"	0"	0"	
WC-1A	WATER CLOSET - PRIVATE FLUSH TANK (ADA COMPLIANT)	UNISEX RESTROOM	FIXTURE: KOHLER MODEL K-3699. WHITE. ELONGATED BOWL. VITRIOUS CHINA. 1.28 GPF. FLOOR MOUNTED. FLUSH TANK. SELF CLEANING. WATERSENSE COMPLIANT. ADA COMPLIANT. VALVE: INTEGRAL SEAT. OLSONITE BRCC WHITE SEAT. ACCESSORIES: ANGLE SUPPLY WITH STOP. BOLT CAPS. FLOOR MOUNTED. 12" ROUGH-IN HEIGHT.	FLOOR MOUNTED		3"	2"	1/2"	0"	
UR-1	URNAL	UNISEX RESTROOM	FIXTURE: KOHLER MODEL K-4991-ET-0. WHITE. VITRIOUS CHINA. WASHOUT. 3/4 INCH INLET. 0.5 GPF. 2 INCH OUTLET. ADA COMPLIANT MOUNTING HEIGHT. VALVE: KOHLER MODEL K-13519-CP. 0.5 GPF MANUAL FLUSH VALVE. ADA COMPLIANT. ACCESSORIES: WALL MOUNT HANGER KIT.	WALL MOUNTED		2"	1 1/2"	3/4"	0"	
LV-1A	LAVATORY (ADA) - PRIVATE	UNISEX RESTROOM	FIXTURE: KOHLER MODEL K-2005. 20"x18". WALL MOUNTED LAVATORY. WHITE VITREOUS CHINA. ADA AND ANSI 117.1 COMPLIANT. 3-HOLE FAUCET. SLOAN MODEL 3P2100 FAUCET. 0.5 GPM. CHROME PLATED. INFARED SENSOR FOR ACTIVATION. HARDWIRED ELECTRICAL. ADA AND ANSI 117.1 COMPLIANT. ACCESSORIES: WALL MOUNTED FIXTURE CARRIER. DEARBORN BRASS MODEL P9702B P-TRAP. PROVIDE WITH LAV GUARD. INCLUDE BELOW DECK THERMOSTATIC MIXING VALVE WITH ALL FAUCETS.			1 1/2"	1 1/2"	1/2"	1/2"	
EWC-1	ELECTRIC WATER COOLER	OFFICE 203	FIXTURE: ELKAY MODEL LVRCGRNTL8WSK. ELECTRIC. HIGHFLOW TWO STATION WATER COOLER. WALL MOUNT BARRIER FREE ACCESS. SELF-CLOSING EASY TOUCH CONTROLS ON FRONT WITH BOTTLE FILLING STATION. 8.0 GPH FLOW. 115 V / 1 PH.	WALL		1 1/2"	1 1/2"	1/2"		
US-1	UTILITY SINK	MIXING AREA	FIXTURE: MUSTEE MODEL 190F UTILITY SINK. 34" X 20" X 24". FLOOR MOUNT. 1 1/2" DRAIN. POLYPROPYLENE CONSTRUCTION. WHITE. FAUCET: MUSTEE MODEL 93.600 LAUNDRY TUB FAUCET. CENTER SET. CHROME. ACCESSORIES: STRAINER-INTTEGRAL.	FLOOR MOUNTED		3"	1 1/2"	1/2"	1/2"	
SK-1	SPECIALTY SINK - PUBLIC	OFFICE 203	FIXTURE: ELKAY. 18 GAUGE 316 STAINLESS STEEL. TOP MOUNT DROP-IN SINK. CENTER DRAIN. LRAD252155 SINGLE BOWL. 25"x21.25"x5.5". ADA COMPLIANT. FAUCET: DELTA 26C3944. DECK MOUNT FAUCET. ADA COMPLIANT. POLISHED CHROME FINISH. ACCESSORIES: ANSI 117.1 AND ADA COMPLIANT INSULATION KIT. 1.5 GPM AERATOR. P-TRAP. PROVIDE WITH 120V GFI DUPLEX RECEPTACLE AND J-BOX FOR FUTURE GARBAGE DISPOSAL.			1 1/2"	1 1/2"	1/2"	1/2"	
HB-1	INTERIOR COLD WATER HOSE BIBB	SEE PLANS	FIXTURE: WOODFORD MODEL 24. VACUUM PROTECTED. ANTI-SIPHON. METAL WHEEL HANDLE. 3/4" BRASS MALE HOSE NOZZLE. CHROME FINISH.	WALL MOUNTED		0"	0"	3/4"	0"	
HB-2	INTERIOR HOT WATER HOSE BIBB	SEE PLANS	FIXTURE: WOODFORD MODEL 24. VACUUM PROTECTED. ANTI-SIPHON. METAL WHEEL HANDLE. 3/4" BRASS MALE HOSE NOZZLE. CHROME FINISH.	WALL MOUNTED		0"	0"	3/4"	0"	
HB-3	EXTERIOR WALL HYDRANT	SEE PLANS	FIXTURE: WOODFORD MODEL 17. FREEZELESS WALL HYDRANT. ANTI-SIPHON. INTEGRAL BACKFLOW PROTECTION. 3/4" BRASS MALE HOSE NOZZLE. POWDER COATED ALUMINUM HANDLE. CAST BRASS VALVE BODY.	WALL MOUNTED		0"	0"	3/4"	0"	

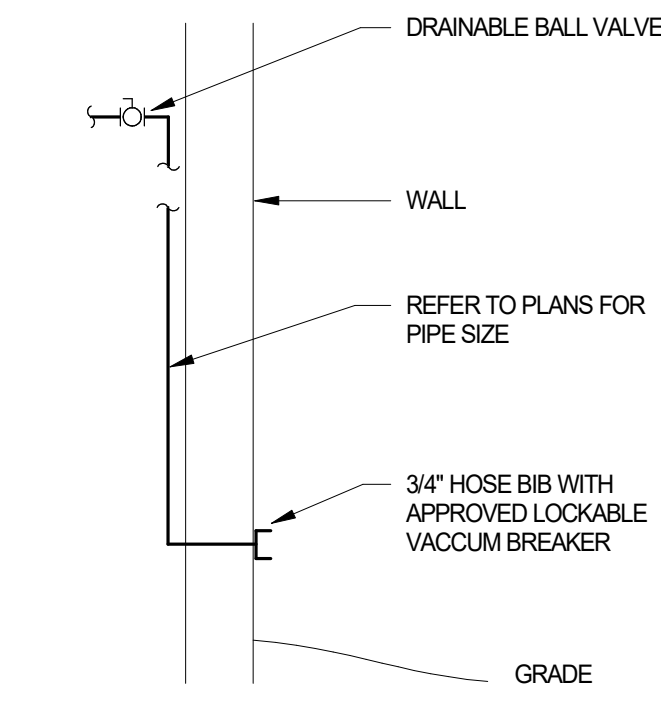
FLOOR AND ROOF DRAINAGE SCHEDULE													
TAG	LOCATION	MANUFACTURER	MODEL	DRAIN				STRAINER				NOTES	
				BODY		OUTLET		SIZE			MATERIAL		FINISH
				MATERIAL	SHAPE	SIZE	LOCATION	DIAMETER	LENGTH	WIDTH			
FD-1	SEE PLANS	JOSAM	3000A-4	CAST IRON	ROUND	2"	BOTTOM	6"	0"	0"	NICKEL BRONZE	SATIN	
FD-1	SEE PLANS	JOSAM	3000A-4	CAST IRON	ROUND	4"	BOTTOM	6"	0"	0"	NICKEL BRONZE	SATIN	

DOMESTIC WATER EXPANSION TANK SCHEDULE								
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	TANK VOLUME	WEIGHT	NOTES
						E		
DET	1	MECH ROOM	MECH ROOM	AMTROL	ST-20V-C	8.0	108	

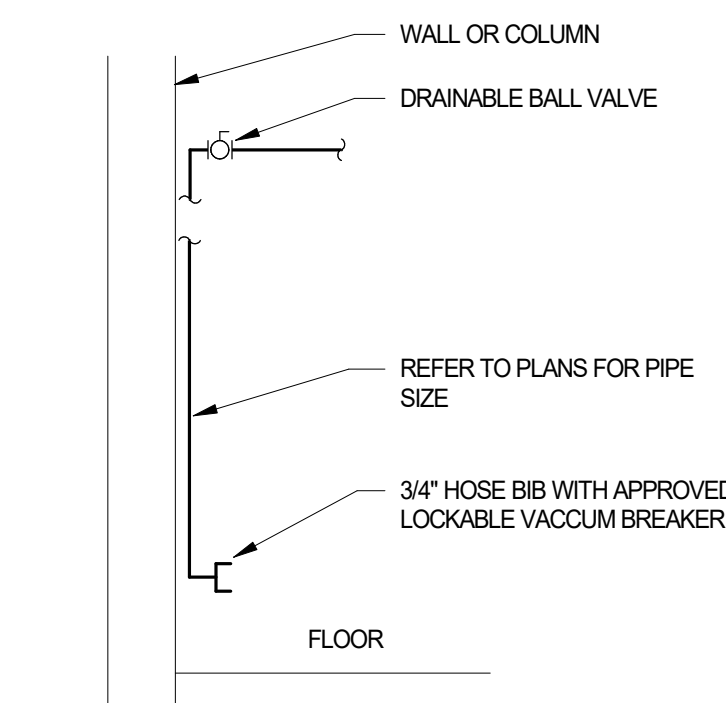
THERMOSTATIC MIXING VALVE SCHEDULE										
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	TYPE	CONNECTIONS			NOTES
							CW	HW	TW	
TMV	A	EYEWASH	EYEWASH	WATTS	1-ZW1070C	1"	1"	1"	1"	
TMV	A	EYEWASH	EYEWASH	WATTS	1-ZW1070C	1"	1"	1"	1"	



4
P151
FLOOR DRAIN DETAIL
1/8" = 1'-0"



5
P151
EXTERIOR HOSE BIBB DETAIL BY OTHERS
1/8" = 1'-0"

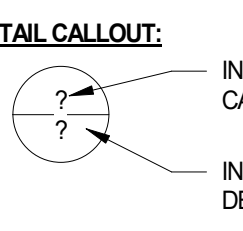

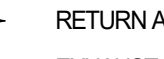

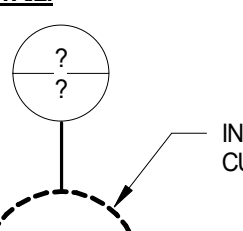
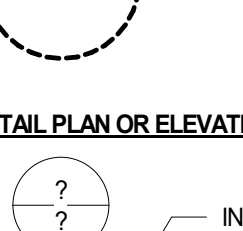
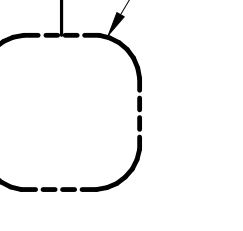
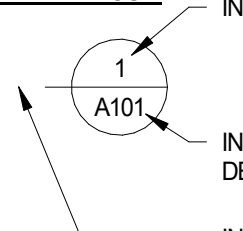
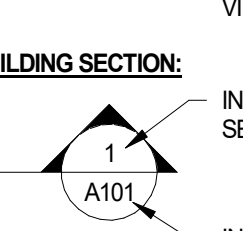
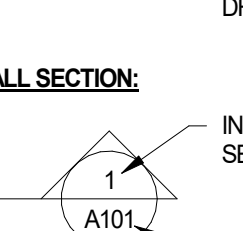
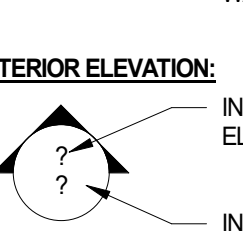
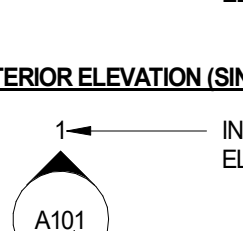
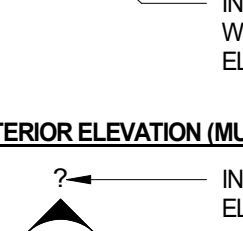
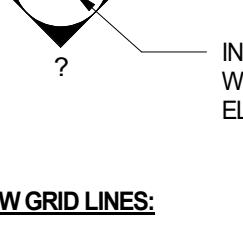
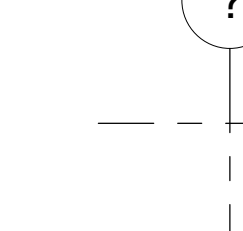
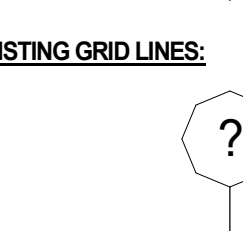
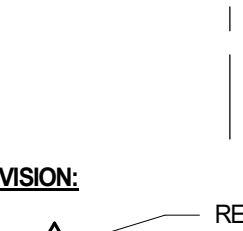
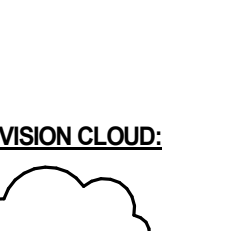
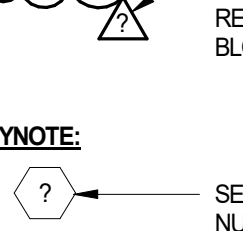
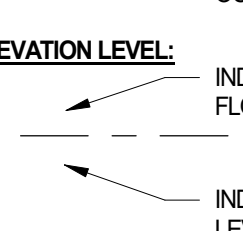
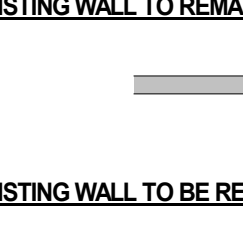
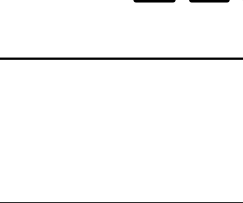


6
P151
INTERIOR HOSE BIBB DETAIL BY OTHERS
1/8" = 1'-0"

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION

CERTIFICATION		
Alexander Sawka	86213	04/09/2025
License Number		Date
DRAWN BY	AMS	
CHECKED BY	AMS	
COMMISSION NUMBER	0000-00	
SHEET TITLE		

A AC A/C ADD ADFL AFF AFMS AHU ALT AMP AP APD APPROX ARCH AS AVG B B BFE BFP BFV BHP BLDG BM BMS BSMT BO BOF BOT BTU BTUH BV BWV C CA CD CF CFH CFM CFRD CH CHC CKT CKV CO CO ₂ COMB CONC COND CONN CONT CONST COORD CORR CT CTRL C/W D D dB DB DBL DDC DEG DEMO DEPT DET DIFF DIA DM DPS DISC DV DMPR DN DOC DWG(S) E EA EAT ECM ELEC ELEV EMER EMS ENGR EQ EQUIP ESP ET EWC EWH EWT EX EXT F °F FC FCO FCU FD FDC FDR FDV FF FLEX FLR FLS FP FPM FSP FPH FT FT HD FTR F&T G GA GAL GALV GC GPH GPM GWH GV GYP H H HB HP HPU HT HTG HTR HWAC HX HYD HZ I ID IN (") INSUL INT INV J JT K KW KWH KS	L L LAT LAV LB(S) LOC LFC LVL LWR M MA MAT MATL MAU MAX MB MEH MCC MECH MED MEZZ MFR(C) MISC MIN MS N NA NC NCN N/O NO NO NO NO NTS O O ₂ OA OC OOH OOV OFS OH OPT ORD OST P PACU PCC PC PD PERIM PH PIV PLBG PROJ PRV PSF PSI PSIG PTAC PVC Q QTY R R RA RAD REG REQ(D) REQM RET REV RH Ri Rm RPZ RTU R&R S S SA SCHED SCW SD SDT SF SFD SIM SK SOG SP SPKLR SQ SS ST STD STRN STRUC SV T T TC TCC TD TEMP TMV TOS TS TYP U U UH UNO V V VAC VAL VAV VB VF VED VFP VOL VSD VTR W WC WH Y YCO YH	L LONG LENGTH LEAVING AIR TEMPERATURE LAUNDRY LB(S) LINEAR FOOT, FEET LOCATIVE(X)N LEVEL LEAVING WATER TEMPERATURE M MIXED AIR MIXED AIR TEMPERATURE MATERIAL MAKEUP AIR UNIT MAXIMUM MOP BASIN THOUSAND BTUH MOTOR CONTROL CENTER MOTORIZED DAMPER MECHANICAL MEZZANINE MANUFACTURED (ER) (NG) MISCELLANEOUS MINIMUM, MINUTE MOP SINK N NOT APPLICABLE NOISE CRITERIA, NORMALLY CLOSED NOT IN CONTRACT NORMALLY OPEN NITRIC OXIDE NITROUS OXIDE NITROGEN DIOXIDE NOT TO SCALE O OXYGEN OUTSIDE AIR ON CENTER ON CENTER HORIZONTAL ON CENTER VERTICAL OUTSIDE DIAMETER OVERFLOW SCUPPER OVERHEAD OPTION OVERFLOW ROOF DRAIN OVERFLOW STORM DRAINAGE P PACKAGED AIR CONDITIONING UNIT PRECAST CONCRETE PUMPED CONDENSATE PUMPED DISCHARGE PERIMETER PHASE POST INDICATOR VALVE PLUMBING PROJECT PRESSURE REDUCING VALVE (PRV) POWER ROOF VENTILATOR (HVAC) POUNDS PER SQ. FT. POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH, GAUGE PACKAGED TERMINAL AIR CONDITIONING POLYVINYL CHLORIDE Q QUANTITY R RADIUS RETURN AIR RADIATOR (ION) ROOF DRAIN REGISTER REQUIRED REQUIREMENT RETURN REVISE (ED) (ION) RELATIVE HUMIDITY ROOM RADON REVOLUTIONS PER MINUTE REDUCED PRESSURE ZONE VALVE ROOFTOP UNIT REMOVE AND REPLACE S SENSOR SUPPLY AIR SOUND ATTENUATOR SCHEDULE SOFTENED COLD WATER SMOKE DAMPER SMOKE DETECTOR SQUARE FEET SMOKE FIRE DAMPER SIMILAR SPECIALTY SINK SLAB ON GRADE STATIC PRESSURE SPRINKLER SQUARE STAINLESS STEEL STORM DRAINAGE STANDARD STRAINER STRUCTURAL STRUCTURAL STACK VENT T THERMOSTAT TEMPERATURE CONTROL TEMPERATURE CONTROL CONTRACTOR TEMPERATURE DIFFERENCE TEMPERATURE THERMOSTATIC MIXING VALVE TOP OF STEEL TAMPER SWITCH TYPICAL U URINAL UNIT HEATER UNLESS NOTED OTHERWISE V VENT PIPE VACUUM VALVE VARIABLE AIR VOLUME VACUUM BREAKER VENTILATION FAN VARIABLE FREQUENCY DRIVE VENT IN FIELD VOLUME VARIABLE SPEED DRIVE VENT TIE/ROOF W WATER CLOSET WALL HYDRANT, WATER HEATER Y YARD CLEANOUT YARD HYDRANT
B BFE BFP BFV BHP BLDG BM BMS BSMT BO BOF BOT BTU BTUH BV BWV C CA CD CF CFH CFM CFRD CH CHC CKT CKV CO CO ₂ COMB CONC COND CONN CONT CONST COORD CORR CT CTRL C/W D D dB DB DBL DDC DEG DEMO DEPT DET DIFF DIA DM DPS DISC DV DMPR DN DOC DWG(S) E EA EAT ECM ELEC ELEV EMER EMS ENGR EQ EQUIP ESP ET EWC EWH EWT EX EXT F °F FC FCO FCU FD FDC FDR FDV FF FLEX FLR FLS FP FPM FSP FPH FT FT HD FTR F&T G GA GAL GALV GC GPH GPM GWH GV GYP H H HB HP HPU HT HTG HTR HWAC HX HYD HZ I ID IN (") INSUL INT INV J JT K KW KWH KS	L L LAT LAV LB(S) LOC LFC LVL LWR M MA MAT MATL MAU MAX MB MEH MCC MECH MED MEZZ MFR(C) MISC MIN MS N NA NC NCN N/O NO NO NO NO NTS O O ₂ OA OC OOH OOV OFS OH OPT ORD OST P PACU PCC PC PD PERIM PH PIV PLBG PROJ PRV PSF PSI PSIG PTAC PVC Q QTY R R RA RAD REG REQ(D) REQM RET REV RH Ri Rm RPZ RTU R&R S S SA SCHED SCW SD SDT SF SFD SIM SK SOG SP SPKLR SQ SS ST STD STRN STRUC SV T T TC TCC TD TEMP TMV TOS TS TYP U U UH UNO V V VAC VAL VAV VB VF VED VFP VOL VSD VTR W WC WH Y YCO YH	L LONG LENGTH LEAVING AIR TEMPERATURE LAUNDRY LB(S) LINEAR FOOT, FEET LOCATIVE(X)N LEVEL LEAVING WATER TEMPERATURE M MIXED AIR MIXED AIR TEMPERATURE MATERIAL MAKEUP AIR UNIT MAXIMUM MOP BASIN THOUSAND BTUH MOTOR CONTROL CENTER MOTORIZED DAMPER MECHANICAL MEZZANINE MANUFACTURED (ER) (NG) MISCELLANEOUS MINIMUM, MINUTE MOP SINK N NOT APPLICABLE NOISE CRITERIA, NORMALLY CLOSED NOT IN CONTRACT NORMALLY OPEN NITRIC OXIDE NITROUS OXIDE NITROGEN DIOXIDE NOT TO SCALE O OXYGEN OUTSIDE AIR ON CENTER ON CENTER HORIZONTAL ON CENTER VERTICAL OUTSIDE DIAMETER OVERFLOW SCUPPER OVERHEAD OPTION OVERFLOW ROOF DRAIN OVERFLOW STORM DRAINAGE P PACKAGED AIR CONDITIONING UNIT PRECAST CONCRETE PUMPED CONDENSATE PUMPED DISCHARGE PERIMETER PHASE POST INDICATOR VALVE PLUMBING PROJECT PRESSURE REDUCING VALVE (PRV) POWER ROOF VENTILATOR (HVAC) POUNDS PER SQ. FT. POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH, GAUGE PACKAGED TERMINAL AIR CONDITIONING POLYVINYL CHLORIDE Q QUANTITY R RADIUS RETURN AIR RADIATOR (ION) ROOF DRAIN REGISTER REQUIRED REQUIREMENT RETURN REVISE (ED) (ION) RELATIVE HUMIDITY ROOM RADON REVOLUTIONS PER MINUTE REDUCED PRESSURE ZONE VALVE ROOFTOP UNIT REMOVE AND REPLACE S SENSOR SUPPLY AIR SOUND ATTENUATOR SCHEDULE SOFTENED COLD WATER SMOKE DAMPER SMOKE DETECTOR SQUARE FEET SMOKE FIRE DAMPER SIMILAR SPECIALTY SINK SLAB ON GRADE STATIC PRESSURE SPRINKLER SQUARE STAINLESS STEEL STORM DRAINAGE STANDARD STRAINER STRUCTURAL STRUCTURAL STACK VENT T THERMOSTAT TEMPERATURE CONTROL TEMPERATURE CONTROL CONTRACTOR TEMPERATURE DIFFERENCE TEMPERATURE THERMOSTATIC MIXING VALVE TOP OF STEEL TAMPER SWITCH TYPICAL U URINAL UNIT HEATER UNLESS NOTED OTHERWISE V VENT PIPE VACUUM VALVE VARIABLE AIR VOLUME VACUUM BREAKER VENTILATION FAN VARIABLE FREQUENCY DRIVE VENT IN FIELD VOLUME VARIABLE SPEED DRIVE VENT TIE/ROOF W WATER CLOSET WALL HYDRANT, WATER HEATER Y YARD CLEANOUT YARD HYDRANT

REFERENCE SYMBOLS		MECHANICAL SYMBOLS	
REFERENCE SYMBOLS INDICATE THAT ADDITIONAL INFORMATION CONCERNING THE PART OF THE WORK REFERENCED MAY BE FOUND AT THE LOCATION INDICATED BY THE SYMBOL AND AS DESCRIBED BELOW.		SYMBOL - DOUBLE LINE	
DETAIL CALLOUT:  INDICATES DETAIL CALLOUT NUMBER		 SUPPLY AIR  RETURN AIR  EXHAUST AIR	
DETAIL:  INDICATES SHEET WHERE DETAIL CALLOUT IS DRAWN		SAME AS DOUBLE LINE	
DETAIL PLAN OR ELEVATION:  INDICATES AREA OF DETAIL CUT PARALLEL TO VIEW		SAME AS DOUBLE LINE	
 INDICATES AREA OF ENLARGED PLAN OR ENLARGED ELEVATION		SAME AS DOUBLE LINE	
DETAIL CALLOUT:  INDICATES SHEET WHERE DETAIL IS DRAWN		SAME AS DOUBLE LINE	
 INDICATES AREA OF DETAIL CUT PERPENDICULAR TO VIEW		SAME AS DOUBLE LINE	
BUILDING SECTION:  INDICATES BUILDING SECTION NUMBER		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE BUILDING SECTION IS DRAWN		SAME AS DOUBLE LINE	
WALL SECTION:  INDICATES WALL SECTION NUMBER		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE WALL SECTION IS DRAWN		SAME AS DOUBLE LINE	
EXTERIOR ELEVATION:  INDICATES EXTERIOR ELEVATION NUMBER		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE EXTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
INTERIOR ELEVATION (SINGLE):  INDICATES INTERIOR ELEVATION NUMBER		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
INTERIOR ELEVATION (MULTIPLE):  INDICATES INTERIOR ELEVATION NUMBER		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
NEW GRID LINES:  INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
 INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
EXISTING GRID LINES:  INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
INDICATES SHEET WHERE INTERIOR ELEVATION IS DRAWN		SAME AS DOUBLE LINE	
REVISION: REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET		SAME AS DOUBLE LINE	
REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET		SAME AS DOUBLE LINE	
REVISION CLOUD: REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET		SAME AS DOUBLE LINE	
REVISION NUMBER - SEE REVISION HISTORY ON TITLE BLOCK OF EACH SHEET		SAME AS DOUBLE LINE	
KEYNOTE: SEE CORRESPONDING NUMBERED KEY NOTE ON SHEET WHERE REFERENCE OCCURS		SAME AS DOUBLE LINE	
SEE CORRESPONDING NUMBERED KEY NOTE ON SHEET WHERE REFERENCE OCCURS		SAME AS DOUBLE LINE	
ELEVATION LEVEL: INDICATES FLOOR LEVEL		SAME AS DOUBLE LINE	
INDICATES FLOOR LEVEL ELEVATION		SAME AS DOUBLE LINE	
EXISTING WALL TO REMAIN 		SAME AS DOUBLE LINE	
		SAME AS DOUBLE LINE	
EXISTING WALL TO BE REMOVED 		SAME AS DOUBLE LINE	
		SAME AS DOUBLE LINE	

MECHANICAL AND PLUMBING SYMBOLS	
ABBR	SYMBOL
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
CD	CONDENSATE DRAINAGE
PCD	PUMPED CONDENSATE DRAINAGE
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
SMS	SNOW MELTING SYSTEM SUPPLY
SMR	SNOW MELTING SYSTEM RETURN
LPS	LOW PRESSURE STEAM SUPPLY
LPR	LOW PRESSURE STEAM RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
MPR	MEDIUM PRESSURE STEAM RETURN
HPS	HIGH PRESSURE STEAM SUPPLY
HPR	HIGH PRESSURE STEAM RETURN
PC	PUMPED STEAM CONDENSATE
RL	REFRIGERANT LIQUID LINE
RS	REFRIGERANT SUCTION LINE
RG	REFRIGERANT HOT GAS LINE
FO	FUEL OIL GENERAL PIPING
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FOV	FUEL OIL TANK VENT
G	GAS PIPING
LP	LIQUEFIED PROPANE
H	HUMIDISTAT
P	PRESSURE SENSOR
S	SENSOR
T	THERMOSTAT
CO	CARBON MONOXIDE SENSOR
NO ₂	NITROGEN DIOXIDE SENSOR
CO ₂	CARBON DIOXIDE SENSOR
PC	PRESSURE CONTROLLER
G	PRESSURE GAUGE
TC	THERMOSTATIC CONTROLLER
T	THERMOMETER
DPS	DIFFERENTIAL PRESSURE SENSOR
BAL. V	BALANCING VALVE
BFP	BACKFLOW PREVENTER
BWV	BACK WATER VALVE
BV	BALL VALVE
BFV	BUTTERFLY VALVE
CKV	CHECK VALVE
	CIRCUIT SETTER - FLOW VENTURI
	GAS COCK
	GAS REGULATOR
GV	GATE VALVE
M	METER
PRV	PRESSURE REDUCING VALVE
P	PUMP
RPZ	REDUCED PRESSURE ZONE VALVE
	RELIEF VALVE
	SHUTOFF VALVE
	SOLENOID VALVE
STRN	STRAINER & STRAINER W/ SHUTOFF
	STEAM TRAP
	THERMOSTATIC MIXING VALVE
	VALVE IN VERTICAL PIPE
	2-WAY, 2-POSITION CONTROL VALVE
	3-WAY, 3-POSITION CONTROL VALVE
	2-WAY, MODULATING CONTROL VALVE
	3-WAY, MODULATING CONTROL VALVE
SHEET NOTES	
A. THE PURPOSE OF THIS SHEET IS TO ILLUSTRATE AND DEFINE TYPICAL GRAPHICS SYMBOLS AND SYSTEMS OF GRAPHIC SYMBOLS WHICH MAY OCCUR ON THE MECHANICAL DRAWINGS. B. THE ILLUSTRATION OF A SYMBOL OR SYSTEM OF SYMBOLS ON THIS SHEET DOES NOT NECESSARILY INDICATE THAT THE BUILDING ITEM OR SYSTEM DESCRIBED BY THE SYMBOL IS USED AS PART OF THE WORK OF THIS PROJECT. REFER TO THE PLANS, ELEVATIONS, SECTIONS, SCHEDULES, DETAILS, AND SPECIFICATIONS TO DETERMINE THE SCOPE OF THE WORK. C. SYMBOLS ARE NOT DRAWN TO SCALE. TO DETERMINE ACTUAL SIZES OF ELEMENTS REPRESENTED BY SYMBOLS, REFER TO THE SPECIFICATIONS AND OTHER DRAWINGS AS MAY APPLY. D. FOR INFORMATION REGARDING SYMBOLS WHICH ARE USED AS ABBREVIATIONS, REFER TO THE MECHANICAL ABBREVIATIONS SHOWN ON THIS SHEET. E. CERTAIN SYMBOLS MAY INCORPORATE SPECIAL ABBREVIATIONS AS PART OF THE SYMBOL. SUCH ABBREVIATIONS ARE AS DERIVED ON THIS SHEET.	

MECHANICAL SHEET INDEX	
SHEET #	SHEET NAME
M001	MECHANICAL COVERSHEET
M002	MECHANICAL NOTE SHEET
M101	LEVEL 1 MECHANICAL PLAN
M701	MECHANICAL DETAILS
MEB01	MECHANICAL AND ELECTRICAL SCHEDULES

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CONSULTANTS

PROJECT TITLE

AGROLIQUID
LIQUID
FERTILIZER
FACILITY LAKE
CITY, FL

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION

CERTIFICATION

Alexander Sawka
86213
License Number

04/09/2025
Date

DRAWN BY

AMS

CHECKED BY

AMS

COMMISSION NUMBER

0000-00

SHEET TITLE

MECHANICAL
COVERSHEET

SHEET NUMBER

M001

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MECHANICAL GENERAL NOTES

- CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS. NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER.
- GENERAL NOTES, SYMBOLS LIST, AND DETAILS ARE APPLICABLE TO ALL DRAWINGS OF THIS SECTION.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT THE INTENT TO SPECIFY OR SHOW EVERY INFLECT, FITTING, OR COMPONENT NECESSARY; HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFICALLY SPECIFIED TO COMPLETE THE SYSTEMS BEING INSTALLED, TESTED AND MADE OPERATIONAL.
- CONTRACTORS SHALL REFER TO ARCHITECTURAL AND ALL OTHER DISCIPLINES DRAWINGS FOR DIMENSIONS AND OTHER GENERAL INFORMATION NECESSARY TO COMPLETE THE WORK.
- THE DOCUMENTS AND SPECIFICATIONS SHALL GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS SHOWN, SPECIFIED, AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTORS. REMOVE ALL DEBRIS CAUSED BY THIS CONTRACTOR'S WORK DAILY.
- ALL MATERIALS, EQUIPMENT, AND METHODS OF INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION.
- ADDRESS QUESTIONS REGARDING DRAWINGS TO ENGINEER IN WRITING BEFORE AWARD OF CONTRACT; OTHERWISE, ENGINEER'S INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
- EACH CONTRACTOR SHALL GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION FOR THIS WORK.
- WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. PIPES, DUCTWORK, EQUIPMENT, AND ACCESSORIES SHALL BE INSTALLED AS TIGHT TO STRUCTURE AS POSSIBLE. MAINTAIN MAXIMUM HEAD ROOM AT ALL TIMES. DO NOT RUN PIPES AND DUCTWORK EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.
- EACH CONTRACTOR IS RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF ITS NEW WORK. CUTTING AND PATCHING SHALL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER. PATCHING MATERIALS SHALL MATCH EXISTING MATERIALS TO THE GREATEST EXTENT POSSIBLE. PROVIDE TOUCH-UP TO MATCH EXISTING SURROUNDING AREAS OF CUTTING AND PATCHING WORK.
- PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT A COPY OF SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE ENGINEER FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED. AT LEAST TEN WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME, FOR SUBMITTAL REVIEW SHALL BE ALLOWED FOR ENGINEER'S REVIEW.
- DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS, OR EQUIPMENT FOR THOSE SPECIFIED SHALL BE REQUESTED IN A SEPARATE LETTER IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO BID.
- MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY ASME AND AGA FOR INTENDED SERVICE.
- AS WORK PROGRESSES, MAINTAIN AND MARK-UP A COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE FOR THE DURATION OF THE CONTRACT. WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS SHALL BE RECORDED CLEARLY AND ACCURATELY, INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN. TURN OVER THE FINAL SET OF "AS BUILT" DRAWINGS TO OWNER AT THE CONCLUSION OF CONSTRUCTION. PROVIDE A COPY OF THE "AS BUILT" DRAWINGS TO THE ENGINEER OF RECORD.
- GUARANTEE WORK OF THIS CONTRACTOR IN WRITING FOR ONE YEAR FROM THE DATE OF OWNER'S ACCEPTANCE OF CERTIFICATE OF SUBSTANTIAL COMPLETION. PROMPTLY, COMPLETELY REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATIONS THAT DEVELOP DEFECTS WITHIN THIS PERIOD. PROMPTLY AND TO OWNER'S SATISFACTION, CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENT UNDER GUARANTEE AT NO ADDITIONAL COST TO OWNER. SUBMIT WRITTEN GUARANTEES TO ARCHITECT AND OWNER BEFORE FINAL PAYMENT. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERRUPTED TO LIMIT OWNER'S RIGHTS UNDER LAW AND THIS CONTRACT.
- EACH RESPECTIVE CONTRACTOR SHALL COORDINATE PROPER ACCESS TO EQUIPMENT THAT REQUIRES INSPECTION, REPLACEMENT, OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12" x 12" AND SHALL BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. ALL LOCATIONS SHALL BE CONFIRMED WITH ARCHITECT.
- CONTRACTORS SHALL FIRE STOP ALL PENETRATIONS THROUGH HORIZONTAL ASSEMBLIES. FIRE RATED WALLS OR PARTITIONS WITH UL RATED ASSEMBLIES WITH AN EQUAL UL RATED FIRE STOP. CONTRACTORS SHALL COORDINATE WITH GENERAL CONTRACTOR TO MAINTAIN CONSISTENT PRODUCT USAGE.
- DO NOT SUPPORT EQUIPMENT FROM CEILINGS. ALL SUPPORT SHALL COME FROM BUILDING STRUCTURE.
- PRODUCTS SUBMITTED AND APPROVED FOR USE THAT NECESSITATE CHANGES TO THE WORK OF OTHER TRADES OF CONTRACT SHALL BE COORDINATED AND ARRANGED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL COORDINATE ITS RESPECTIVE CEILING MOUNTED EQUIPMENT WITH OTHER TRADE CONTRACTORS PRIOR TO INSTALLATION TO AVOID CONFLICTS.
- PRIOR TO ACCEPTANCE OF THE FACILITY, EACH RESPECTIVE CONTRACTOR SHALL ASSURE THAT ALL SYSTEMS SHALL BE TESTED, BALANCED, AND ARE OPERATED AS A DEMONSTRATION TO THE OWNER, OR THE OWNER'S REPRESENTATIVE, THAT THE INSTALLATION AND PERFORMANCE OF THESE SYSTEMS AND/OR PARTS CONFORM TO THE DESIGN INTENT.

HVAC GENERAL NOTES

- DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE LATEST ISSUES OF SMACNA STANDARDS.
- SUPPORT EQUIPMENT, PIPING, AND DUCTWORK FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION.
- PROVIDE PROPER ACCESS TO MATERIALS AND EQUIPMENT THAT REQUIRE INSPECTION, REPLACEMENT, REPAIR, OR SERVICE, SUCH AS, COILS, DAMPERS, HEATERS, VALVES, ETC. IF PROPER ACCESS CANNOT BE PROVIDED, CONFER WITH THE ENGINEER AS TO THE BEST METHOD OF APPROACH FOR MINIMIZING EFFECT OF FREQUENT ACCESS WHICH MAY RESULT.
- MAINTAIN MAXIMUM HEADROOM AT ALL TIMES. DO NOT RUN PIPES EXPOSED UNLESS SHOWN EXPOSED ON DRAWINGS. RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF JOISTS. COORDINATE ELEVATIONS AND LOCATIONS WITH WORK OF OTHER CONTRACTORS.
- WHEN SHOWN OR REQUIRED, RELOCATE EXISTING OBSTRUCTIONS TO INSTALL NEW EQUIPMENT OR MATERIALS.
- DIFFUSER SIZES SHOWN ARE NECK SIZES. REGISTER AND GRILLE SIZES ARE NOMINAL.
- THOROUGHLY CLEAN ALL NEW DUCTWORK AFTER INSTALLATION.
- INSULATION SHALL NOT BE INSTALLED UNTIL AFTER ALL DUCT AND PIPE TESTING PROCEDURES HAVE BEEN COMPLETED.
- PROVIDE NEOPRENE IMPREGNATED CANVAS FLEXIBLE CONNECTION BETWEEN DUCTWORK AND ANY RECIPROCATING OR ROTATING EQUIPMENT.
- PROVIDE AN OPERATION AND MAINTENANCE MANUAL TO THE BUILDING OWNER PRIOR TO BUILDING TURNOVER.
- ALL VARIABLE FREQUENCY DRIVES FURNISHED UNDER DIVISION 21-23 SHALL BE MANUFACTURED BY THE SAME MANUFACTURER; THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE.
- THERMOSTATS SHALL BE MOUNTED AT 48" A.F.F. THERMOSTATIC SENSORS AND GAS SENSORS SHALL BE MOUNTED AT 60" A.F.F.

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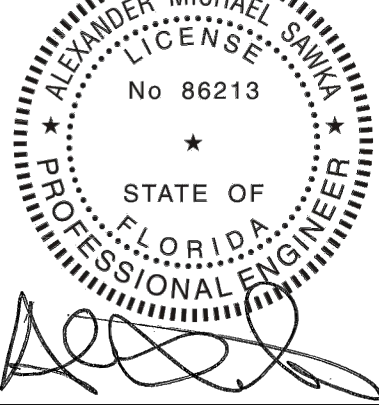
CONSULTANTS

PROJECT TITLE

AGROLIQUID
LIQUID
FERTILIZER
FACILITY LAKE
CITY, FL

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION

CERTIFICATION



Alexander Sawka	04/09/2025
86213	Date
License Number	
DRAWN BY	AMS
CHECKED BY	AMS
COMMISSION NUMBER	0000-00

SHEET TITLE

MECHANICAL
NOTE SHEET

SHEET NUMBER

M002

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KEYNOTES

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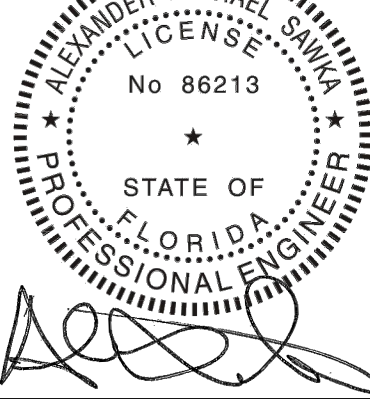
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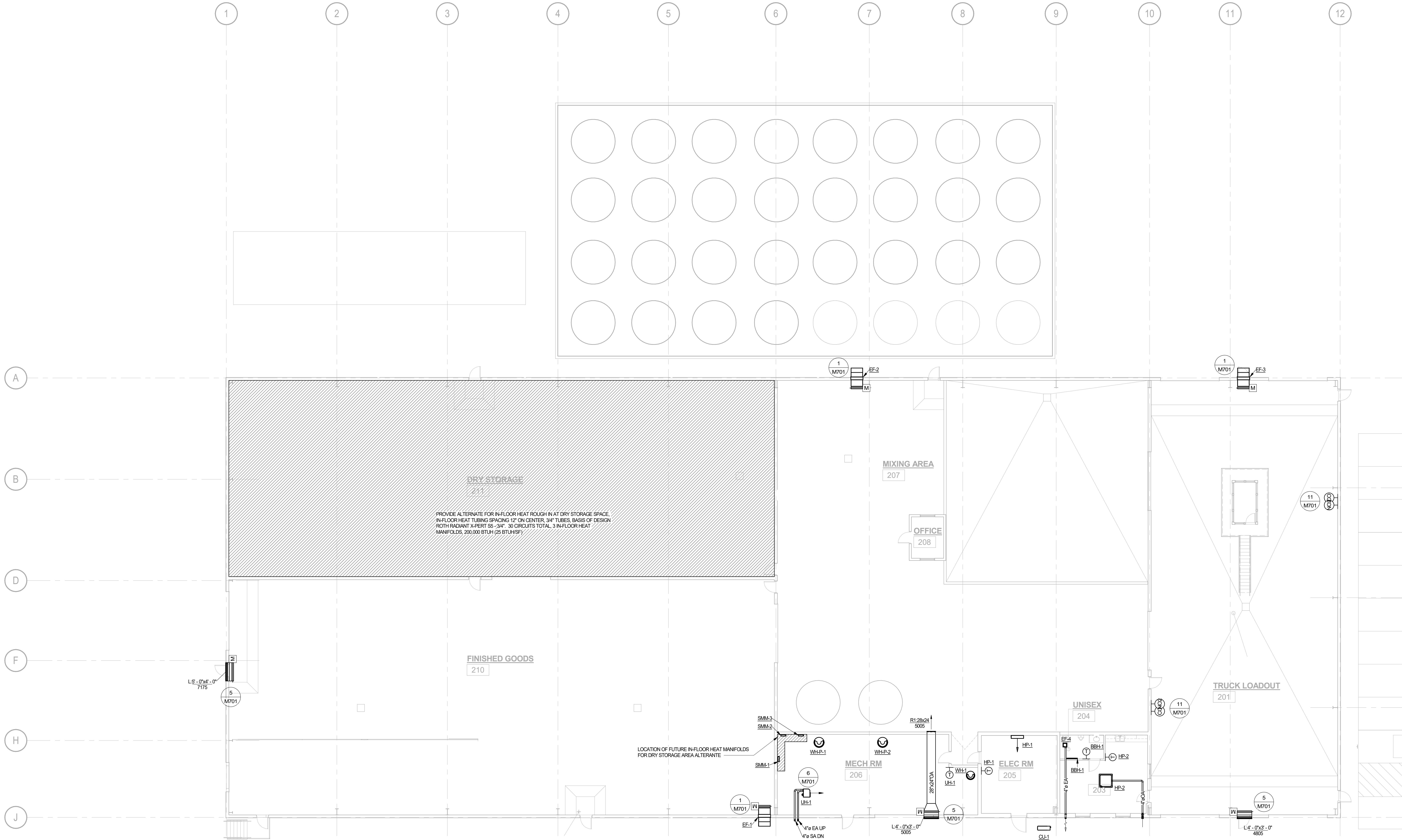
SHEET TITLE

LEVEL 1
MECHANICAL
PLAN

SHEET NUMBER

M101

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2 LEVEL 1 MECHANICAL PLAN
3/32\"/>

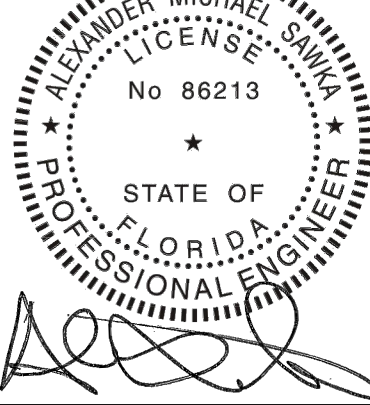
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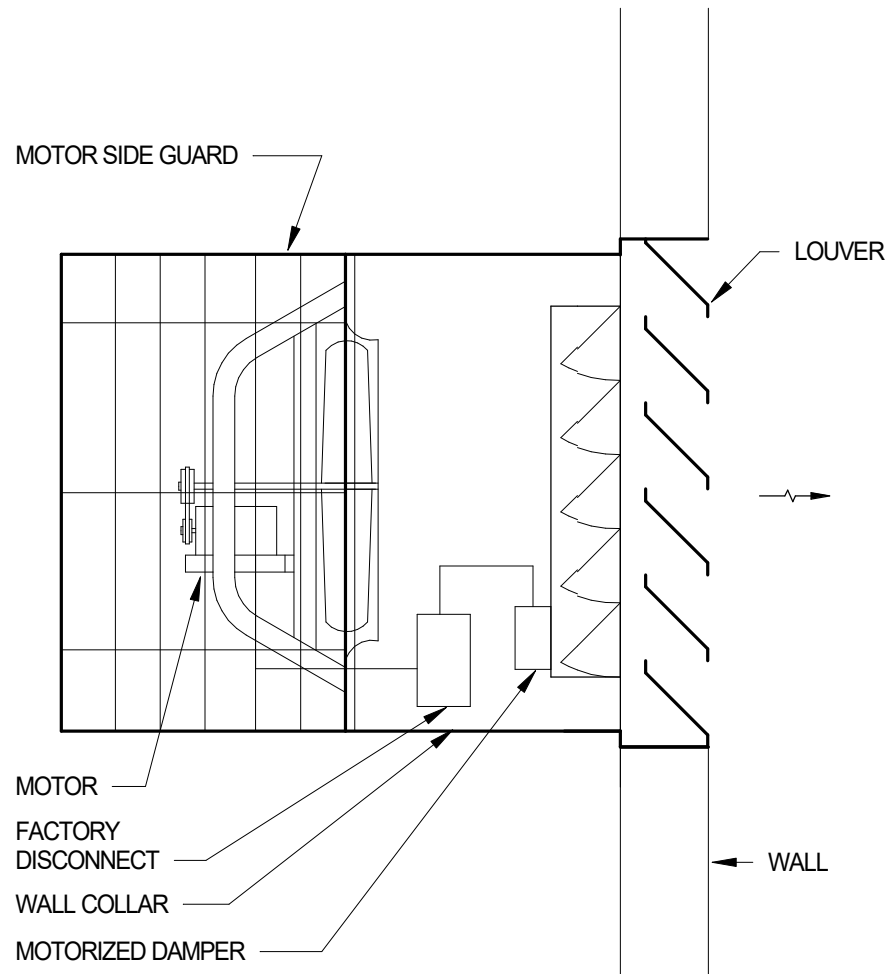
Alexander Sawka	04/09/2025
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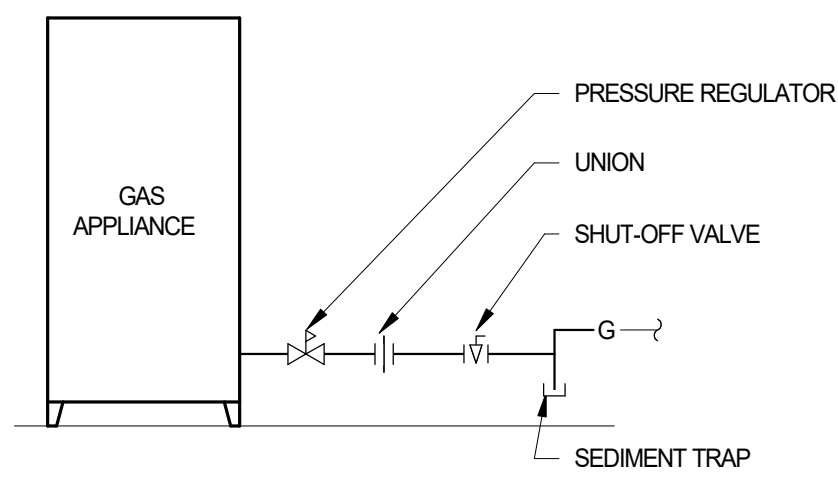
MECHANICAL
DETAILS

SHEET NUMBER

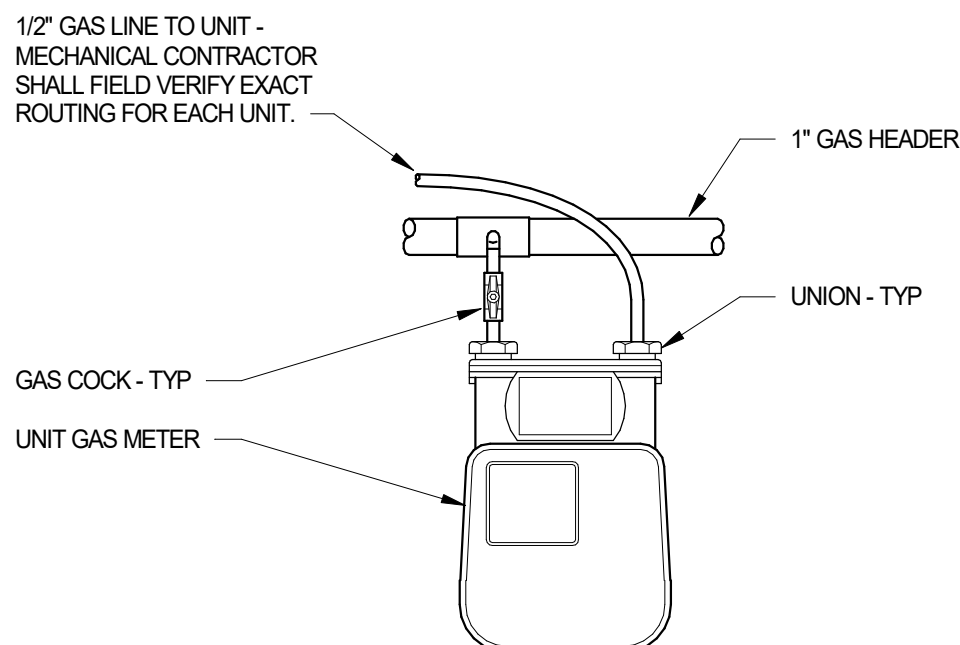
M701



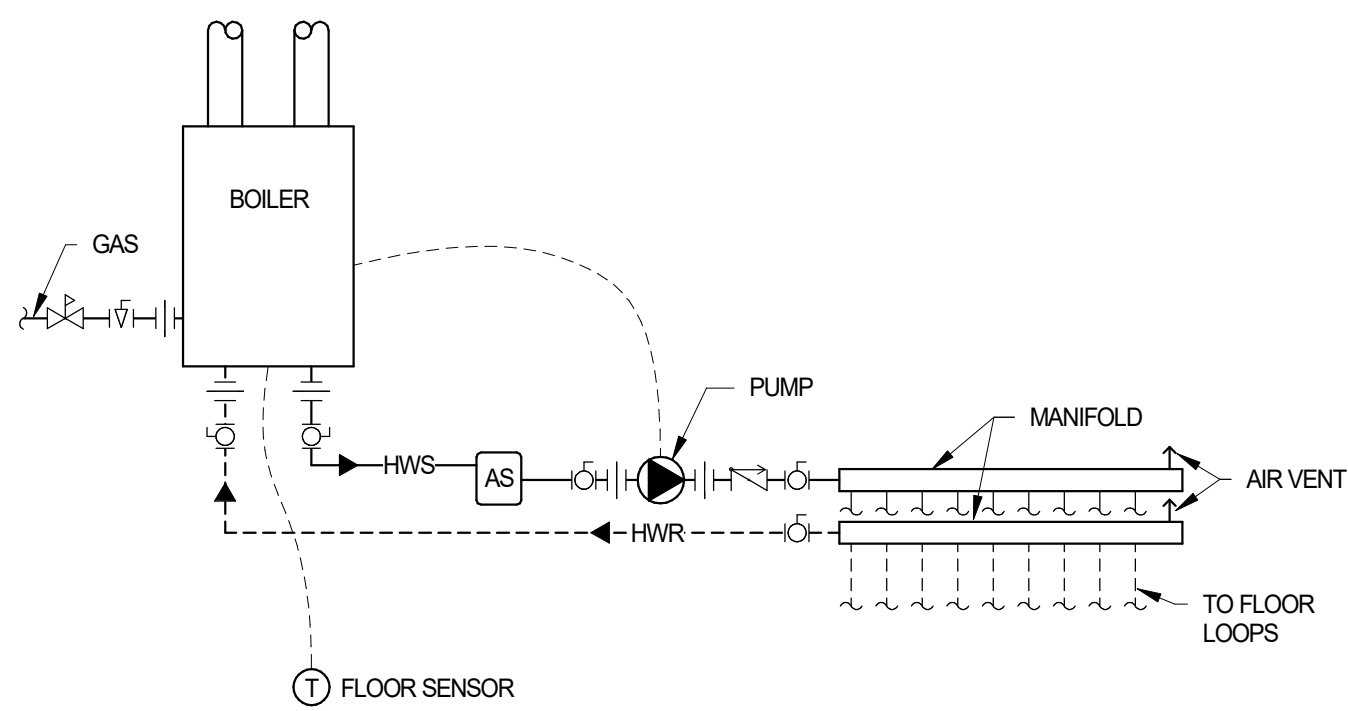
1 SIDE WALL EXHAUST FAN DETAIL
1/8" = 1'-0"



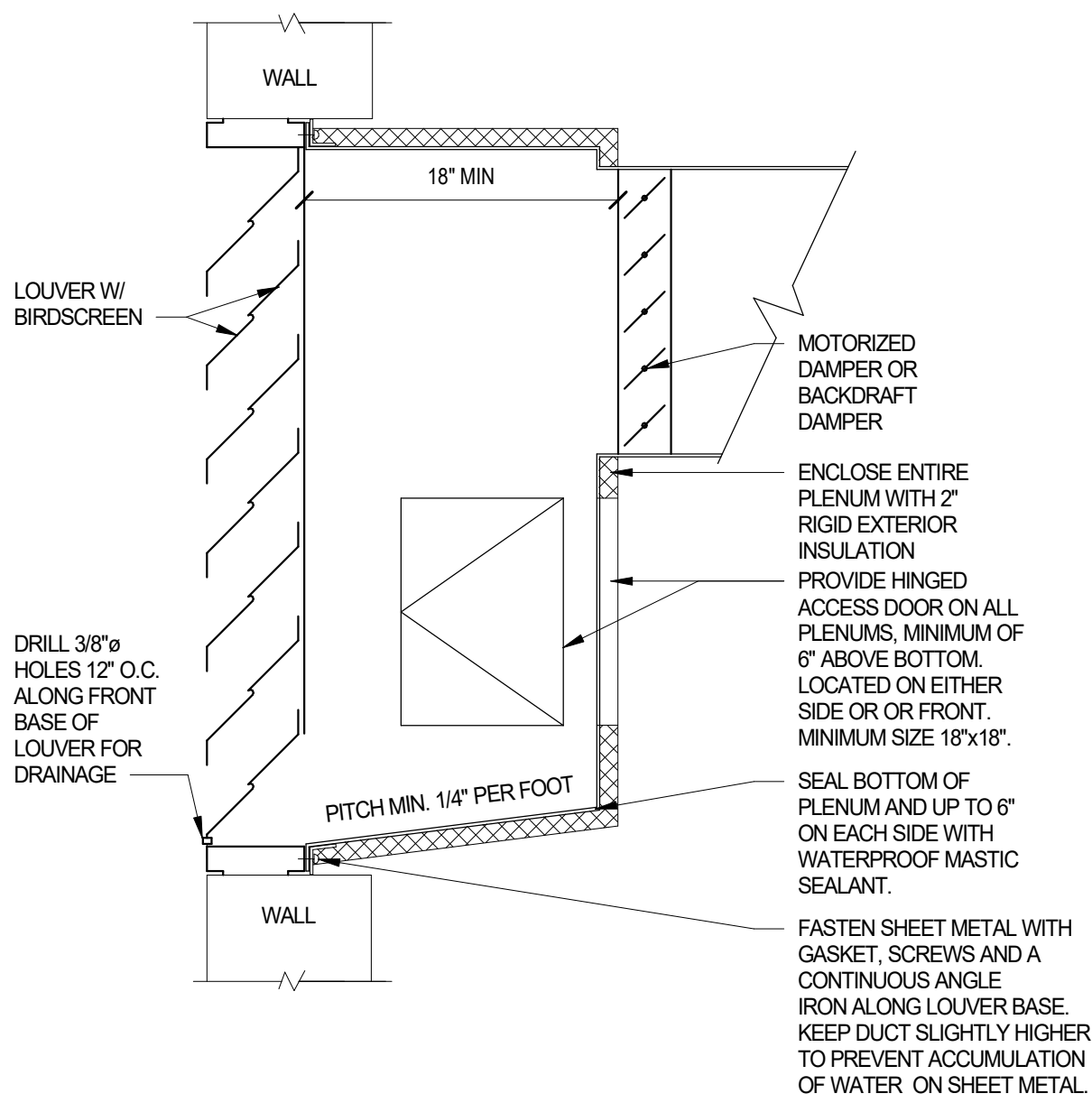
2 GAS BRANCH PIPE CONNECTION DETAIL
1/8" = 1'-0"



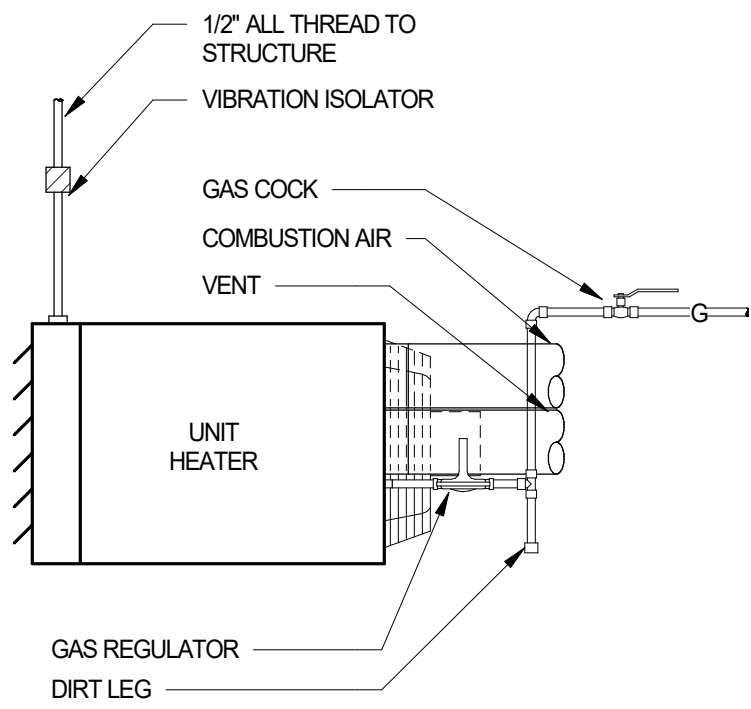
3 GAS METER DETAIL
1 1/2" = 1'-0"



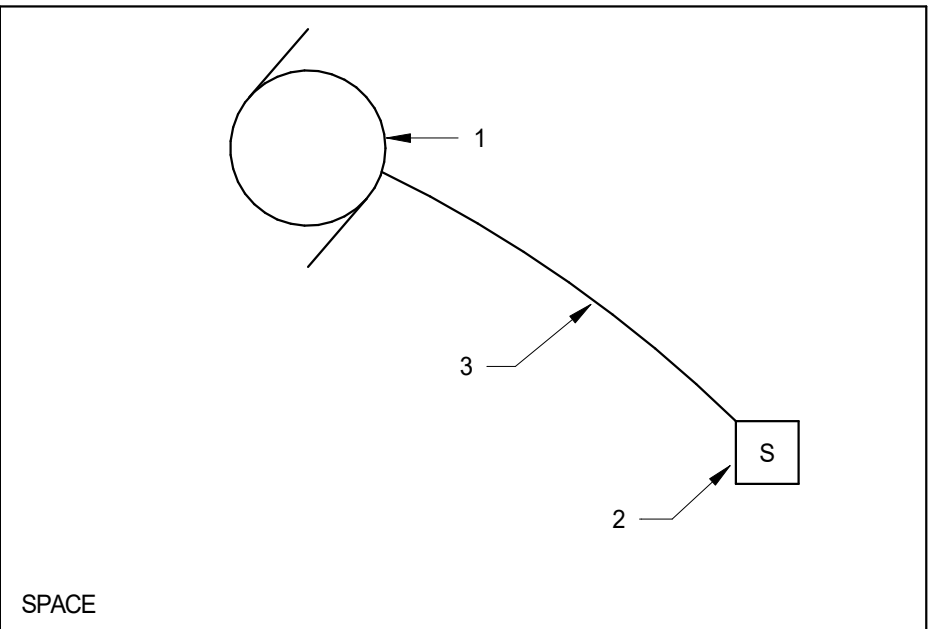
4 MANIFOLD PIPING DETAIL
1/2" = 1'-0"



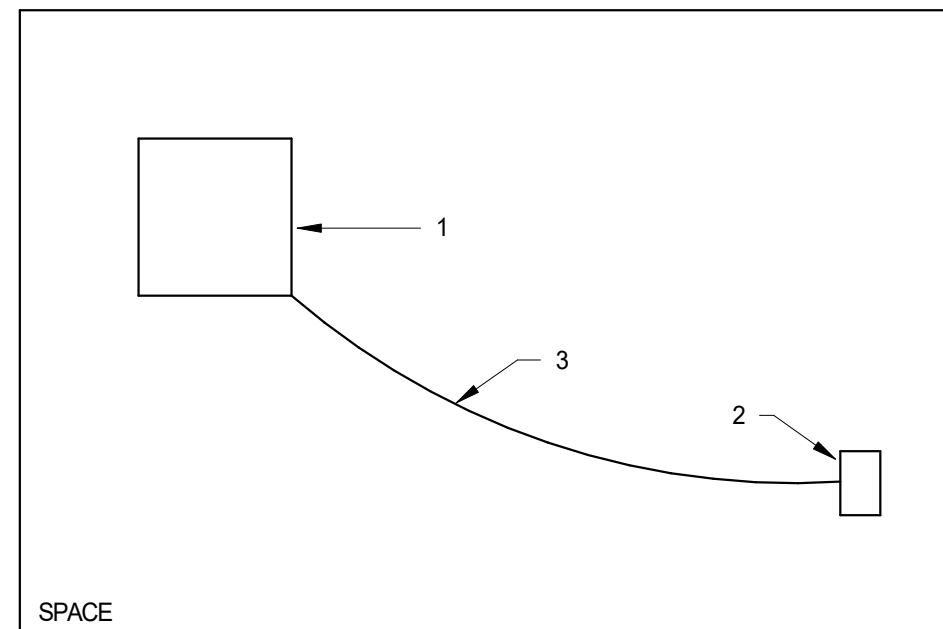
5 OUTSIDE AIR INTAKE DETAIL
1/8" = 1'-0"



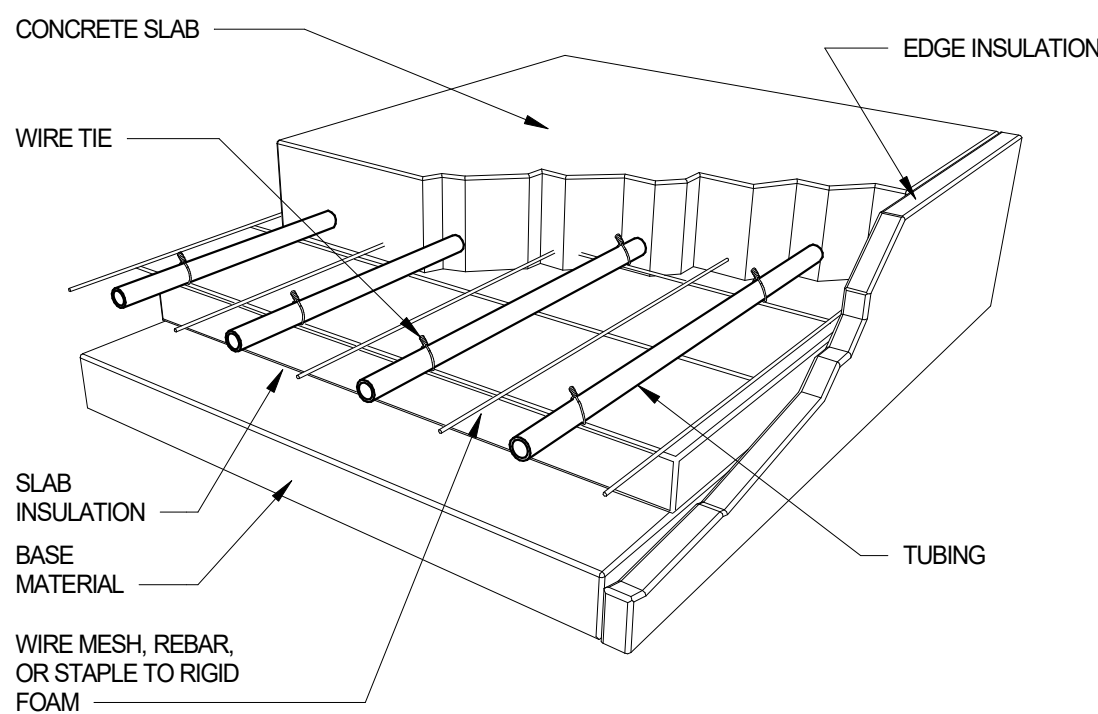
6 HORIZONTAL GAS UNIT HEATER DETAIL
1" = 1'-0"



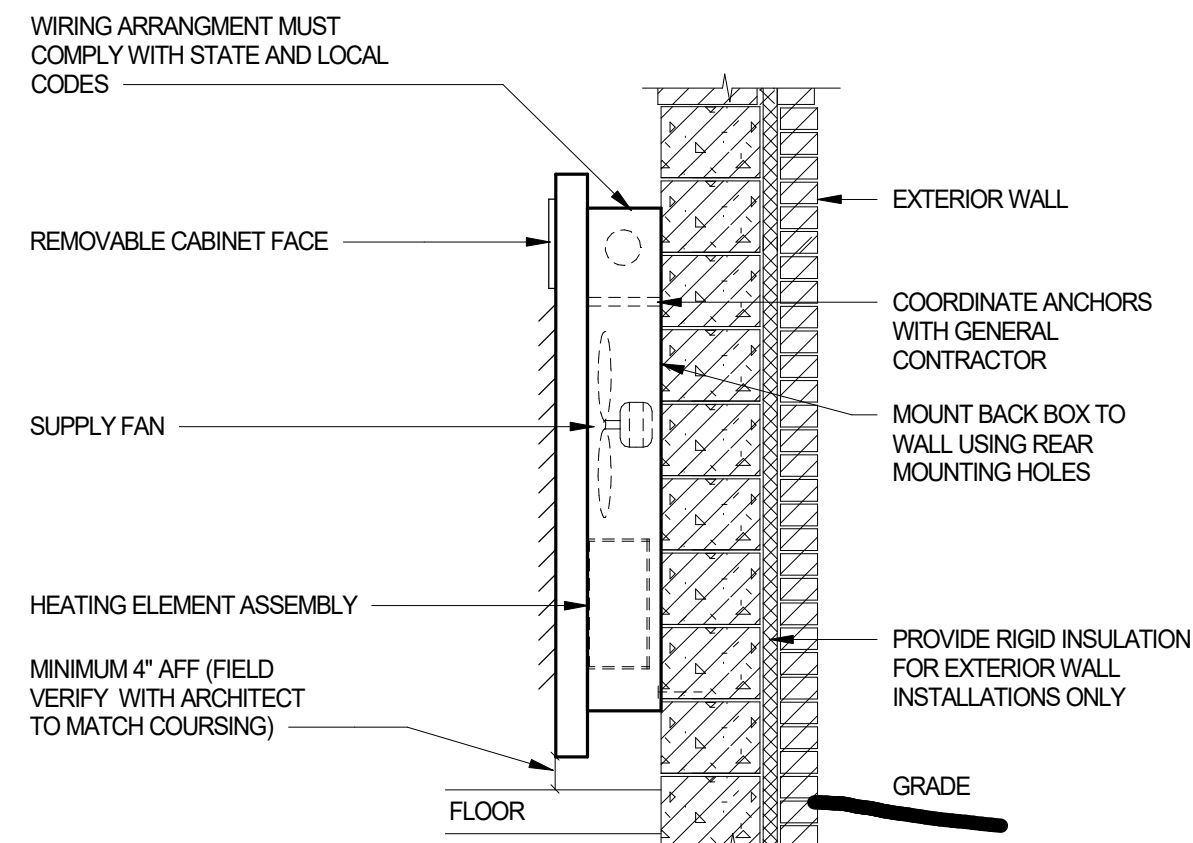
- NOTES:
- BATHROOM EXHAUST FAN PROVIDED BY DIV 23.
 - TOGGLE SWITCH TO CONTROL LIGHT AND FAN BY DIV 26. FAN SHALL RUN FOR 10 MINUTES (5-60 MINUTE ADJUSTABLE) AFTER SWITCH HAS BEEN TURNED "OFF."
 - 120V POWER WIRE BY DIV 26.



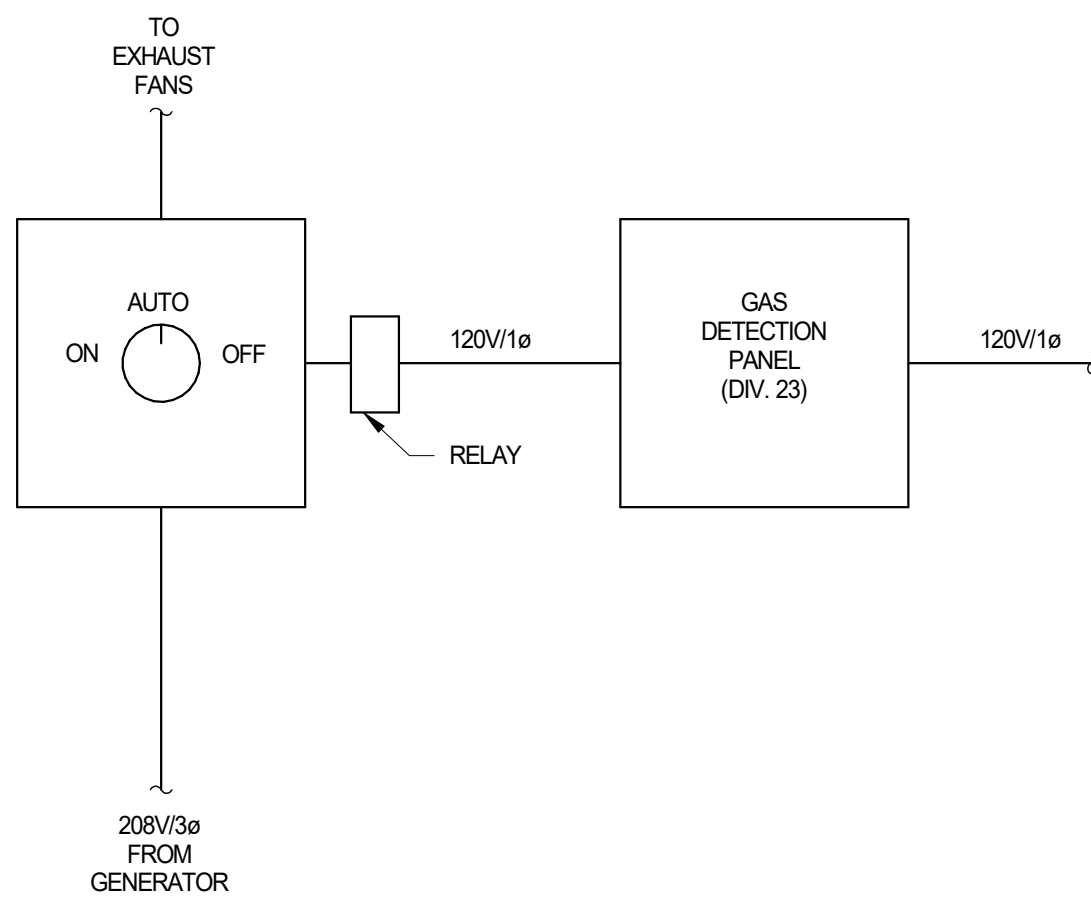
- NOTES:
- TYPICAL ELECTRIC OR GAS HEATING/COOLING UNIT.
 - 24V THERMOSTAT PROVIDED BY DIV 23. PROVIDE CLEAR PLASTIC LOCKING COVER IN "PUBLIC" AREA.
 - 24V CONTROL WIRING PROVIDED BY DIV 23 CONTRACTOR.



9 CONCRETE ON GRADE WITH UNDERSLAB INSULATION DETAIL
1/8" = 1'-0"



10 CABINET UNIT HEATER SURFACE MOUNT DETAIL
1/8" = 1'-0"



- MODES OF OPERATION
- "ON" ALL GARAGE EXHAUST FANS SHALL BE ENERGIZED
- "AUTO" UPON A SIGNAL FROM THE GAS DETECTION PANEL, ALL ASSOCIATED EXHAUST FANS SHALL BE ENERGIZED. FANS SHALL BE ENERGIZED BY THE GAS DETECTION PANEL.
- WHEN THE EMERGENCY GENERATOR IS ENERGIZED, ALL GARAGE EXHAUST FANS SHALL BE ENERGIZED. GARAGE EXHAUST FANS SHALL REMAIN OPERATIONAL FOR 30 MINUTES (ADJUSTABLE) AFTER GENERATOR IS DE-ENERGIZED.

11 GARAGE EXHAUST SCHEMATIC DIAGRAM
1/8" = 1'-0"

LOUVER SCHEDULE										
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	CFM	AIR PD (IN. W.C.)	SIZE WIDTH	HEIGHT	NOTES
L	1	FINISHED GOODS	FINISHED GOODS	RUSKIN	ELF6375DX	7175	0.10	60"	48"	1
L	2	MECH ROOM	MIXING AREA	RUSKIN	ELF6375DX	5005	0.10	48"	36"	1
L	3	TRUCK LOADOUT	TRUCK LOADOUT	RUSKIN	ELF6375DX	4805	0.10	48"	36"	1

NOTES:
1. CUSTOM COLOR SELECTED BY ARCHITECT

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE									
TAG	TYPE	MANUFACTURER	MODEL	MATERIAL	FINISH	FACE SIZE		THROW PATTERN	NOTES
						LENGTH	WIDTH		
R1	RETURN GRILLE	TITUS	350RL	STEEL	WHITE	24"	28"	35° FIXED DEFLECTION	

UNIT HEATER SCHEDULE																	
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	TYPE	MOUNTING	FUEL	CFM	HEATING COIL DATA		ELECTRICAL		DISCONNECT		NOTES	
										INPUT BTUH	OUTPUT BTUH	CONTROL	HP	CONTROLLED BY	SUPPLIED BY		INSTALLED BY
UH	1	MECH ROOM	MECH ROOM	REZNOR	UDAS 30	UNIT HEATER	CEILING HUNG	NATURAL GAS	456	30000	24600	GAS HEATER	0.06	DIV 23	DIV 23	DIV 26	BY MTR 1

NOTES:
1. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT, HARDWIRED TO UNIT

FAN SCHEDULE															
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	FAN DATA					ELECTRICAL	DISCONNECT		LOCATION	NOTES
						TYPE	MOUNTING	CFM	ESP	RPM		SUPPLIED BY	INSTALLED BY		
EF	1	FINISHED GOODS	FINISHED GOODS	GREENHECK	SBE-2H30	PROPELLER FAN	WALL MOUNTED	7175	0.25	788	1	DIV 23	DIV 26	BY EQUIP	1
EF	2	MIXING AREA	MIXING AREA	GREENHECK	SBE-2L24	PROPELLER FAN	WALL MOUNTED	5005	0.25	754	0.75	DIV 23	DIV 26	BY EQUIP	1
EF	3	TRUCK LOADOUT	TRUCK LOADOUT	GREENHECK	SBE-2H30	PROPELLER FAN	WALL MOUNTED	4805	0.25	742	0.75	DIV 23	DIV 26	BY EQUIP	1
EF	4	UNISEX BATH	UNISEX BATH	PANASONIC	FV-0510V/S1	CEILING FAN	CEILING	50	0.25	1025	0	DIV 23	DIV 26	BY MTR	2

NOTES:
1. PROVIDE WITH FAN MOTOR GUARD, DISCHARGE HOOD AND MOTORIZED DAMPER. PROVIDE WITH TIMECLOCK.
2. PROVIDE WITH WALL SWITCH CONTROL.

DOMESTIC WATER HEATER SCHEDULE																	
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	TOTAL VOLUME	FUEL	RECOVERY (GPH)	INLET TEMP	HW TEMP	ELEC KW	CONNECTION SIZES	ELECTRICAL	DISCONNECT		LOCATION	NOTES
														SUPPLIED BY	INSTALLED BY		
WH	1	MECH ROOM	DOMESTIC HOT WATER	A.O. SMITH	DSE-65-60	65	ELECTRIC	246	40.0	140.0	60	1 1/2"	DIV 22	DIV 22	DIV 26	BY EQUIP	
WH	P-1	MECH ROOM	PROCESS WATER	BY OTHERS	BY OTHERS	0	-	0	40.0	0.0	0	1 1/2"	DIV 22	DIV 22	DIV 26	BY EQUIP	1
WH	P-2	MECH ROOM	PROCESS WATER	BY OTHERS	BY OTHERS	0	-	0	40.0	0.0	0	1 1/2"	DIV 22	DIV 22	DIV 26	BY EQUIP	1

NOTES:
1. SHOWN FOR REFERENCE ONLY. PROVIDED AND INSTALLED BY OTHERS.

CONDENSING UNIT SCHEDULE																
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	REFRIGERANT TYPE	COOLING DATA		HEATING DATA			DISCONNECT		LOCATION	NOTES	
							CAPACITY (BTUH)	EER2	SUMMER DB	CAPACITY (BTUH)	HSPF2	WINTER DB	SUPPLIED BY			INSTALLED BY
CU	1	GRADE	ELEC / OFFICE	MITSUBISHI	MXZ-SM36NAM2	R-32	36000	15.0	95.0	41500	11.0	25.0	DIV 26	DIV 26	BY MTR	1,2,3

NOTES:
1. MOUNT ON CONCRETE HOUSEKEEPING PAD, PROVIDED BY OTHERS. PROVIDE MIN 12" CONDENSER STAND
2. 2-PORT CONDENSING UNIT
3. POWER FOR INDOOR FAN COIL UNIT MAY BE ROUTED FROM CONDENSING UNIT, CONFIRM WIRING WITH MFG'S INSTALLATION MANUAL

HEAT PUMP UNIT SCHEDULE													
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	AIRFLOW (CFM)		COOLING COIL	HEATING COIL	DISCONNECT		STARTER	NOTES
						SUPPLY AIR	OUTSIDE AIR			SUPPLIED BY	INSTALLED BY		
HP	1	ELEC ROOM	ELEC ROOM	DAIKIN	MSZ-GL18NA	622	0	18000	21600	DIV 23	DIV 26	BY EQUIP	1,2,3
HP	2	OFFICE	OFFICE	DAIKIN	PLA-A18EA8	460	50	18000	19000	DIV 23	DIV 26	BY EQUIP	1,2,3

NOTES:
1. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT, HARDWIRED TO UNIT
2. POWER FOR FAN COIL UNIT MAY BE ROUTED FROM CONDENSING UNIT, CONFIRM WIRING WITH MFG'S INSTALLATION MANUAL
3. FOU CAPABLE OF OPERATING WITH A MULTI-PORT CONDENSING UNIT

BASEBOARD SCHEDULE												
TAG	NO.	LOCATION	SERVES	MANUFACTURER	MODEL	LENGTH (IN)	MOUNTING	ELECTRICAL	DISCONNECT			NOTES
									SUPPLIED BY	INSTALLED BY	LOCATION	
BBH	1	UNISEX BATH	UNISEX BATH	BERKO	2513W	36"	WALL	750	DIV 23	DIV 26	BY HTR	1

NOTES:
1. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT, HARDWIRED TO UNIT

SCHEDULE SHEET GENERAL NOTES

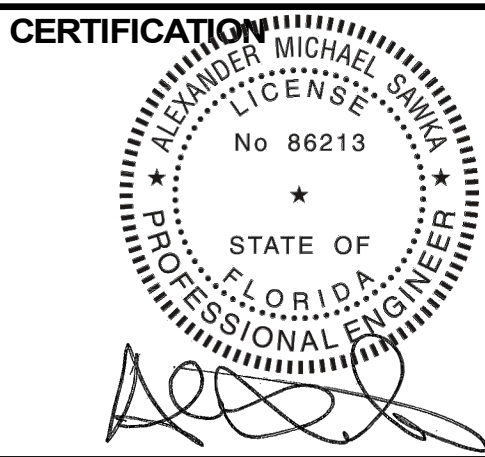
- WHERE UNITS OF MEASURE ARE NOT INDICATED, THE FOLLOWING APPLIES:
A. TEMPERATURE - DEGREES FAHRENHEIT (°F)
B. HEAD AND FLUID PRESSURE DROP - FEET OF WATER COLUMN (FT WC)
C. FLUID VELOCITY - FEET PER SECOND (FPS)
D. FLUID FLOW - GALLONS PER MINUTE (GPM)
E. STATIC PRESSURE - INCHES OF WATER COLUMN (IN WC)
F. AIR VELOCITY - FEET PER MINUTE (FPM)
G. AIR FLOW - CUBIC FEET PER MINUTE (CFM)
- MAXIMUM AIR SIDE PRESSURE DROP (INCH W.C.) SHALL BE AS FOLLOWS:
A. COOLING COILS 1.00
B. HEATING COILS FOR RTUS AND ERUS 0.50
C. HEAT RECOVERY APPARATUS 0.75
- MAXIMUM COIL FACE VELOCITY (FPM) SHALL BE AS FOLLOWS:
A. COOLING COILS FOR VAV UNITS 525
B. COOLING COILS FOR CAV UNITS 500
C. HEATING COILS 500
D. FILTERS 400
- OUTDOOR AIR, EXHAUST AIR, AND RELIEF AIR DAMPERS SHALL BE LOW LEAKAGE TYPE DAMPERS WITH A MAXIMUM LEAKAGE RATE OF 3 CFM/SF.
- PROVIDE/INCLUDE THE FOLLOWING FILTER PRESSURE DROP ALLOWANCES FOR ALL FAN MOTOR AND DRIVE SELECTIONS:
A. AIR HANDLING EQUIPMENT:
a. MERV 7 & 8 PRE-FILTERS - CLEAN FILTER PD PLUS 0.25 IN WC - DIRTY FILTER PD
b. MERV 11 THRU MERV 14 FILTERS - CLEAN FILTER PD PLUS 0.50 IN WC - DIRTY FILTER PD
B. DUCTED FURNACES, PACUS & SPLIT SYSTEMS:
a. FILTER - CLEAN FILTER PD PLUS 0.20 IN WC - DIRTY FILTER PD
- ALL FANS INCLUDED IN A FAN ARRAY SHALL BE PROVIDED WITH BACKDRAFT DAMPERS. THE BACKDRAFT DAMPERS SHALL HAVE A SYSTEM EFFECT NO GREATER THAN 5% OF THE RATED INTERNAL STATIC PRESSURE DROP OF THE UNIT.
- HEAT WHEELS SHALL BE FACTORY FURNISHED AND WIRED INCLUDING A CONTROLLER, SENSORS, AND VFD. THE CONTROLLER SHALL BE PROVIDED WITH AN INTEGRAL COMMUNICATION GATEWAY FOR COMMUNICATION WITH THE BUILDING DDC ENERGY MANAGEMENT SYSTEM.
- ALL EQUIPMENT VARIABLE FREQUENCY DRIVES (VFD'S) SHALL COMPLY WITH SPECIFICATION SECTION 230515.

CONSULTANTS

PROJECT TITLE

AGROLIQUID
LIQUID
FERTILIZER
FACILITY LAKE
CITY, FL

ISSUE #	DATE	DESCRIPTION
1	04/09/2025	ISSUED FOR CONSTRUCTION



Alexander Sawka	04/09/2025
86213	Date
License Number	
DRAWN BY	AMS
CHECKED BY	AMS
COMMISSION NUMBER	0000-00

SHEET TITLE

MECHANICAL
AND ELECTRICAL
SCHEDULES

SHEET NUMBER

ME801