

ATTACHMENT F.  
BAXTER FAMILY HOUSING PHASE I – VERTICAL CONSTRUCTION

A	AIR	LAV	LAVATORY		SANITARY SEWER		FLOOR OR YARD CLEANOUT
AAV	AUTOMATIC AIR VENT	LF	LINEAL FEET		VENT PIPING		FLOOR DRAIN
ABV	ABOVE				DOMESTIC COLD WATER		THERMOSTAT
ADA	AMERICANS WITH DISABILITIES ACT				DOMESTIC HOT WATER		DOC TEMPERATURE SENSOR
AD	ACCESS DOOR	MBH	THOUSAND BTUH		PIPE UP		SENSOR
AFF	ABOVE FINISHED FLOOR	MU	BOILER MAKEUP WATER		PIPE DOWN	E	EMERGENCY SHUT-OFF SWITCH
AFG	ABOVE FINISHED GRADE	MOD	MOTOR OPERATED DAMPER		TEE UP		SUPPLY/COMBUSTION AIR
AHAP	AS HIGH AS POSSIBLE	MPG	MEDIUM PRESSURE GAS		TEE DOWN		EXHAUST AIR
AL	ALUMINUM	MTD	MOUNTED		CAP		ROUND DUCT
AMPS	AMPERES				UNION		VOLUME DAMPER
APD	AIR PRESSURE DROP				DIRECTION OF FLOW		MOTORIZED CONTROL DAMPER
ARCH	ARCHITECTURAL	NC	NOISE CRITERIA		BALL VALVE		ACOUSTIC LINED DUCTWORK
		N. C.	NORMALLY CLOSED		2-WAY CONTROL VALVE		DUCT SIZE
BDD	BACKDRAFT DAMPER	NP	NON POTABLE		3-WAY CONTROL VALVE		EXTERNALLY INSULATED DUCT
BLDG	BUILDING	N. O.	NORMALLY OPEN		THERMOSTATIC MIXING VALVE		TURNING VANES
BI	BACK IRON	NTS	NOT TO SCALE		SWING CHECK VALVE		FLEXIBLE DUCT CONNECTION
BOD	BOTTOM OF DUCT				SPRING CHECK VALVE		FLEXIBLE DUCT
BTUH	BRITISH THERMAL UNIT/HOUR				BALANCE/SHUT-OFF VALVE		ACCESS DOOR
		O/A	OUTSIDE AIR		PRESSURE REDUCING VALVE		POINT OF CONNECTION
CA	COMBUSTION AIR	OC	ON CENTER		PRESSURE/TEMP RELIEF VALVE		
CD	CONDENSATE	OD	OVERFLOW DRAIN		SPILL PROOF VACUUM BREAKER		
CAP	CAPACITY	ON	OVERFLOW NOZZLE		HOSE BIB		
CFM	CUBIC FEET PER MINUTE	OW	OILY WASTE		WATER HAMMER ARRESTOR		
CIRC	CIRCULATING				PUMP		
CLG	CEILING	PD	PRESSURE DROP		END-OF-LINE CLEANOUT		
CONT	CONTINUED	PE	POLYETHYLENE PIPE		FILTER		
CO	CLEANOUT	PG	PROPYLENE GLYCOL		METER		
CU	COPPER	PH	PHASE		PIPE GUIDE		
CW	COLD WATER	PSI	POUND PER SQUARE INCH		PIPE ANCHOR		
CLW	CLEAN WATER(AFTER RO FILTER)	PSIG	POUNDS PER SQUARE INCH GAUGE		THERMOMETER		
		R/A	RETURN AIR		PRESSURE GAUGE W/ ISO COCK		
DIA	DIAMETER	RPM	REVOLUTIONS PER MINUTE		STRAINER WITH BLOWDOWN		
dB	DECIBELS	RL	RAIN LEADER				
DEG	DEGREE						
DIM	DIMENSION	S/A	SUPPLY AIR				
DN	DOWN	SGS	SNOWMELT GLYCOL SUPPLY				
DWG	DRAWING	SGR	SNOWMELT GLYCOL RETURN				
		SP	STATIC PRESSURE				
E/A	EXHAUST AIR	SQ	SQUARE				
EAT	ENTERING AIR TEMPERATURE	SS	SANITARY SEWER				
EFF	EFFICIENCY						
EXH	EXHAUST	TEMP	TEMPERATURE				
EWT	ENTERING WATER TEMPERATURE	TOD	TOP OF DUCT				
ESP	EXTERNAL STATIC PRESSURE	TOS	TOP OF SLAB				
EGT	ENTERING GLYCOL TEMPERATURE	TP	TRAP PRIMER				
ENT	ENTERING	TSP	TOTAL STATIC PRESSURE				
		TSTAT	THERMOSTAT				
FT	FEET	TW	TEMPERED WATER				
FPM	FEET PER MINUTE	TWC	TEMPERED WATER CIRCULATED				
FC	FORWARD CURVE	TYP.	TYPICAL				
F	FARENHEIT						
FCO	FLOOR CLEANOUT	V	VENT				
FD	FIRE DAMPER	VEL	VELOCITY				
FDC	FIRE DEPARTMENT CONNECTION	V.T.R.	VENT THRU ROOF				
FLR	FLOOR						
		W/	WITH				
GA	GAUGE	W/O	WITHOUT				
GPH	GALLONS PER HOUR	W	WASTE (SANITARY SEWER)				
GAL	GALLONS	WCO	WALL CLEAN OUT				
GPM	GALLONS PER MINUTE	WG	WATER GAUGE				
		WHA	WATER HAMMER ARRESTOR				
HD	HEAD	WPD	WATER PRESSURE DROP				
HW	HOT WATER						
HWC	HOT WATER CIRCULATION	YCO	YARD CLEAN OUT				
HPS	HIGH PRESSURE STEAM						
HP	HORSEPOWER						
IN	INCHES						

**PROJECT INFORMATION:**  
**NEW 6 UNIT APARTMENT COMPLEX**



**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

- REVISIONS:
- 1.
  - 2.
  - 3.
  - 4.
  - 5.

PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

**M1.0**



7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
4/21/25

GIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504

- REVISIONS:
1. 4/14/25
  2. 4/21/25
  - 3.
  - 4.
  - 5.

PROJECT NR: 2025-15  
 DATE: 3/23/25  
 DRAWN BY: RJT  
 SCALE: AS NOTED  
 SHEET NUMBER:

M2.0

GENERAL NOTES

THE CONTRACTOR SHALL BALANCE THE AIR DUCT SYSTEMS ACCORDING TO NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) RECOMMENDED PROCEDURES AND CONTRACT DOCUMENTS, AND TO THE SATISFACTION OF THE OWNER. AIR FLOW'S ARE TO BE BALANCED TO WITHIN 10% OF INDICATED FLOWS, PER AMERICAN AIR BALANCING COUNCIL(AABC) RECOMMENDED METHODS,

PROVIDE GALVANIZED SHEET METAL WHERE CALLED OUT ON THE PLANS. SEAL ALL DUCT SEAMS AND JOINTS AIR TIGHT. INSTALL VOLUME DAMPERS AT EACH DUCT BRANCH AS NEEDED TO ENSURE PROPER BALANCING. ALL SHEET METAL WORK TO BE CONSTRUCTED, INSTALLED, TESTED, SUPPORTED AND BALANCED IN ACCORDANCE WITH SMACNA STANDARDS. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES WIDTH OF DUCT ON CENTERLINE. IF 1-1/2 TIMES WIDTH CANNOT BE ACHIEVED AND WHERE RECTANGULAR ELBOWS ARE USED, CONSTRUCTOR SHALL INSTALL AIR FOIL TURNING VANES. WHERE ACOUSTICAL LINING IS REQUIRED, PROVIDE TURNING VANES OF PERFORATED METAL WITH GLASS FIBER INSULATION. WELD IN PLACE. TRANSFORM DUCT SIZE GRADUALLY, NOT EXCEEDINGLY 15" DIVERGENCE AND 30" CONVERGENCE. PROVIDE STANDARD 45 DEGREE LATERAL WYE TAKEOFFS, UNLESS OTHERWISE INDICATED WHERE 90 DEGREE CONICAL TEE CONNECTIONS MAY BE USED. ALL ROUND DUCTWORK SHALL BE SPIRAL, NO EXCEPTIONS.

INSULATED FLEXIBLE DUCTS: FABRIC SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE OR FLAT STEEL BANDS; RATED TO 2 INCHES WG POSITIVE AND 1.5 INCHES WG NEGATIVE FOR LOW PRESSURE DUCTS AND 15 INCH WG POSITIVE OR NEGATIVE FOR MEDIUM HIGH PRESSURE DUCTS WRAPPED WITH FLEXIBLE GLASS FIBER INSULATION, ENCLOSED BY SEAMLESS ALUMINUM PIGMENTED PLASTIC VAPOR BARRIER JACKET; MAXIMUM 0.23 K VALUE AT 75 DEG F.

CONTROL DAMPERS - MULTI-BLADE, OPPOSED BLADE ACTION, CONTROL DAMPERS OF EXTRUDED ALUMINUM, WITH AIR FOIL TYPE BLADES OF MAXIMUM SIX INCH WIDTH, BLADES POSITIONED ACROSS SHORT AIR OPENING DIMENSION ACROSS SHORT AIR OPENING DIMENSIONS, FIELD REPLACEABLE EXTRUDED VINYL SEALED EDGES, LINKED TOGETHER IN RATTLE FREE MANNER, NON-CORROSIVE MOLDED SYNTHETIC BEARINGS, SQUARE OR HEXAGONAL AXLES FOR POSITIVE LOCKING CONNECTION TO BLADES AND LINKAGE, DOCUMENTED LEAKAGE RATE NOT TO EXCEED 6 CFM/SQ. FT. AT 4 INCH W.G.

DUCT SOUND LINING - FLEXIBLE GLASS FIBER; ANSI/ASTM C1071; K' VALUE OR 0.24 AT 75 DEG F; COATED AIR SIDE FOR MAXIMUM 5,00 FT./MIN AIR VELOCITY, UL LISTED ADHESIVE GALVANIZED STEEL PINS.

ALL DUCTWORK MUST BE INSULATED TO A MINIMUM OF 10' INSIDE OF EXTERIOR WALL IF DUCT IS CONNECTED WITH OUTSIDE AIR OPENING.

DUCTWORK - 1" THICK FLEXIBLE INSULATION; AVERAGE THERMAL CONDUCTIVITY K EQUALS 0.24 AT 75 DEGREES F MEAN TEMPERATURE AT 1.5 PCF DENSITY. ATSM. FACTORY APPLIED APOR BARRIER FLAME RETARDENT FOIL-SCRIM-KRAFT (FSK) OR ALL SERVICE JACKET AND TAPE WITH PERMEABILITY RATING EQUALS 0.02 PERMS. ASTM 96. PROVIDE 1" FIBERGLASS INSULATION WITH A COMPLETE FACTORY APPLIED VAPOR BARRIER JACKET ON ALL EXHAUST DUCTWORK WITHIN 10' OF EXTERIOR OPENINGS AND MEDIUM PRESSURE SUPPLY DUCTWORK. INSULATE OUTSIDE AIR DUCTWORK WITH 2" RIGID EXTERIOR FSK DUCT WRAP AND CANVAS FINISH.

ALL DUCT PENETRATIONS OF I-JOISTS MUST BE COORDINATED WITH AND APPROVED BY THE STRUCTURAL ENGINEER IF PENETRATIONSAR MADE. INSPECTOR TO VERIFY.

GENERAL NOTES

HEATING SYSTEM:  
 PEX HEATING PIPING: STANDARDS: ASTM F876/F877, CSA B137.5, DIN 4726, NSF 14, SDR 9  
 CERTIFICATIONS: NSF-RFH, (RADIANT FLOOR HEATING)  
 UPC LISTED BY IAPMO  
 PRESSURE RATED 100PSI AT 180F.

COPPER PIPE: TYPE L, ASTM B88, WITH SWEAT FITTINGS AND 430 SILVER SOLDER JOINTS.  
 STEEL PIPE: BLACK STEEL ASTM A120 OR A53 GRADE A OR B, STANDARD WEIGHT.  
 STEEL FITTINGS: 2 INCHES AND SMALLER - 150-POUND BLACK MALLEABLE IRON, BLACK, SCREWED, ANSI B16.3 AND ASTM A97. 2-1/2 INCHES AND LARGER - STANDARD WEIGHT, SEAMLESS STEEL, BUTT-WELDING TO ANSI B16.9.GRADE WPB.

PIPE INSULATION: FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED ALL-SERVICE JACKET; FACTORY PREMOLDED PVC FITTING AND VALVE COVERS. THERMAL CONDUCTIVITY K=0.24 AT 100°F MEAN TEMPERATURE. THICKNESS: 1.0-INCH FOR GLYCOL HEATING SUPPLY AND RETURN SYSTEM. THICKNESS: 1.5-INCH FOR GLYCOL HEATING SUPPLY AND RETURN SYSTEM, HEATING SUPPLY AND RETURN SYSTEM FOR PIPES 2 1/2" OR LARGER. DO NOT INSULATE HEATING PIPING WITHIN THE BASEBOARD ENCLOSURE. PROVIDE A 20-GAUGE SHEET METAL SLEEVE WITH MINERAL WOOL PACKING, FULL DEPTH, AT ALL WALL PENETRATIONS.

PLASTIC PIPE MARKERS: FACTORY FABRICATED, FLEXIBLE, SEMI-RIGID PLASTIC, PERFORMED TO FIT AROUND PIPE OR PIPE COVERING.

DIELECTRIC UNIONS: PROVIDE AT EACH JOINT BETWEEN DISSIMILAR-METALS.

PRESSURE FLUSH THE HEATING PIPING TO REMOVE IRON OXIDES AND MILL SCALE FROM THE SYSTEM. FLUSH THE PIPING WITH TRISODIUM PHOSPHATE SOLUTION, 1 POUND FOR EACH 50 GALLONS OF WATER WHICH SHALL BE CIRCULATED FOR FOUR HOURS, THEN DRAINED AND FLUSHED WITH CLEAN WATER. REPEAT THIS PROCESS UNTIL THE SYSTEM IS CLEAN. EXERCISE PROPER CARE DURING CLEANING AND FLUSHING OF SYSTEM TO ENSURE NO DAMAGE IS DONE TO ANY EQUIPMENT, VALVES, OR FITTINGS.

TEST THE HEATING SYSTEMS AT 100 PSI WITH NO PRESSURE DROP OVER A FOUR-HOUR PERIOD, WITH SYSTEM STABILIZED AT DESIGN TEMPERATURE. OBSERVE SYSTEM FOR LEAKS, FAULTY CIRCULATION, EXPANSION AND CONTRACTION, AND REPAIR ANY DEFICIENCIES.

GENERAL NOTES

WASTE AND VENT PIPING - ABS PIPE;ASTM D2751. FITTINGS: ABS, JOINTS:ASTM D2235, SOLVENT WELD.

VTR'A: PROVIDE 1" FIBERGLASS INSULATION W/ VAPOR BARRIER TO 3'-0" BELOW ROOF DECK.

DOMESTIC WATER PIPING (CW/HW)

COPPER TUBING, ASTM B88, TYPE L, HARD DRAWN.  
 FITTINGS: ASME B 16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER,  
 JOINTS: ASTM B32, LEAD FREE SOLDER, WATER SOLUBLE FLUX OR PRO PRESS SYSTEM.

CPVC TUBING:  
 1/2" TO 2" FLOW GUARD GOLD CPVC: ASTM D2846, NSF LISTED, SDR 11,  
 FITTINGS: ASTM F 439 SOLVENT WELDED SOCKET TYPE 2" AND LARGER CORZAN CPVC: ASTM F441, NSF LISTED ,SCHEDULE 80

PEX TUBING:  
 CROSS-LINKED HIGH DENSITY POLYTHENE. TUBING SHALL BE PRODUCED BY USING THE SILANE METHOD OF CROSS-LINKING AND SHALL MEET THE DIMENSION AND PERFORMANCE SPECIFICATIONS OF ASTM F876/F877 AND CSA B137.5. TUBING SHALL ALSO COMPLY WITH ANS/NSF 61 AS SUITABLE FOR USE WITH POTABLE WATER. PEX PIPING NOT TO BE INSTALLED WITHIN FIRST 18" WHERE PIPING CONNECTS TO A WATER HEATER. UPC 604.13

RAIN LEADER PIPING:

RAINLEADERS: CAST IRON WITH NO-HUB FITTINGS OR DWV ABS PIPE AND FITTINGS. DWV ABS CANNOT BE USED IN EXPOSED AREAS OR RETURN PLENUMS. MINIMUM SLOPE OF 1/4" PER FOOT UNLESS NOTED OTHERWISE FOR4" AND LARGER PIPES.

PIPE INSULATION: FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED ALL-SERVICE JACKET; FACTORY PREMOLDED PVC FITTING AND VALVE COVERS. THERMAL CONDUCTIVITY K=0.24 AT 100°F MEAN TEMPERATURE. THICKNESS: 1.0-INCH.

CLEANOUTS TO BE PROVIDED AS PER UPC 707. CLEANOUTS TO BE GAS AND LIQUID TIGHT. HORIZONTAL DRAINAGE PIPING TO BE PROVIDED WITH CLEANOUT AT ITS UPPER TERMINAL, AND EACH RUN OF PIPING THAT IS 100 FT IN TOTAL DEVELOPED LENGTH SHALL ALSO BE PROVIDED WITH A CLEANOUT AS WELL AS EVERY 100 FT OF PIPING OR PIPING THAT HAS AN AGGREGATE CHANGE OF DIRECTION EXCEEDING 135 DEG. EXCEPTIONS ARE ROVIDED IN UPC 707 AS WELL.

FLANGES UNIONS, AND COUPLINGS- 150 PSIG MALLEABLE IRON UNIONS FOR THREADED FERROUS PIPING; BRONZE UNIONS FOR COPPER PIPE, SOLDERED JOINTS.

WATER HAMMER ARRESTORS SHALL BE INSTALLED AS PER UPC SECTION 609.10 AND AS PER PDI WH-201-2006 IN ACCESSIBLE LOCATIONS OR PROVIDE ACCESS DOORS AS REQUIRED, MANUFACTURED BY J.R. SMITH OR APPROVED EQUAL.

CONTROL VALVES - BRONZE BODY AND SEAT WITH STAINLESSSTEEL STEM AND SCREWED ENDS. ANSI CLASS 250 BODY RATING. SUITABLE FOR FLUID TEMPERATURES OF UP TO 300 DEG. F CONTROL VALVES SHALL BE CORRECTLY SELECTED FOR SERVICE AND FLOW OF SYSTEM SERVED. A PRESSURE DROP OF 3 PSI SHALL BE USED TO AS A SIZING GUIDLINE FOR

MODULATING VALVES, TWO POSITION SHUT-OFF VALVES SHALL BE LINE SIZE. PROVIDE ELECTRONIC ACTUATORS WITH SUFFICIENT CLOSE-OFF PRESSURE TO CLOSE-OFF AGAINST SYSTEM PUMP HEAD.

HIGH EFFICIENCY BOILER B-1 REQUIRES THE CONDENSATE TO BE PROCESSED THROUGH A FACTORY BUILT CONDENSATE NEUTRALIZER AND PIPED TO AN APPROVED RECEPTICLE PER IFGC 307.2 PLUS LOCAL AMENDMENT.

GENERAL NOTES

PROJECT SHALL BE CONSTRUCTED TO THE 2021 UNIFORM PLUMBING CODE (UPC), 2021 INTERNATIONAL FUEL GAS CODE (IFGC), INTERNATIONAL MECHANICAL CODE 2021 AS ADOPTED AND AMENDED BY THE STATE OF ALASKA, THE INTERNATIONAL MECHANICAL CODE 2021 CHAPTERS 1-15 AND APPENDIX A, ARE ADOPTED BY REFERENCE TO REGULATE ALL OCCUPANCIES AND BUILDINGS, EXCEPT THAT THE IMC IS REVISED BY DELETING ALL THE REFERENCES TO THE INTERNATIONAL PLUMBING CODE, AND REPLACING WITH PLUMBING CODE AS ADOPTED BY 8 AAC 63.010, AS AMENDED FROM TIME TO TIME (WHICH MAY BE FOUND AT HTTPS://WWW.AKLEG.GOV/BASIS/AAC.ASP#8.63.010).

SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.

ALL PIPING, DUCTWORK AND EQUIPMENT SHALL BE INSTALLED FOR SEISMIC EVENT IN ACCORDANCE WITH THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE AND ASCE 7.

CONTRACTOR SHALL PROVIDE THE OWNER WITH OPERATING AND MAINTENANCE MANUALS, TO INCLUDE MANUFACTURER'S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS-BUILT, AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE.

PROVIDE ACCURATE PROJECT RECORD AS-BUILT DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.

PROVIDE CONTROL SYSTEM TO ACCOMPLISH THE SEQUENCE OF OPERATIONS. PROVIDE ALL CONTROLLERS, TEMPERATURE SENSORS, THERMOSTATS, CONTROL VALVES, CONTROL DAMPERS, ELECTRIC ACTUATORS, TRANSFORMERS, WIRING AND ASSOCIATED COMPONENTS. INSTALL ALL WIRING IN ACCORDANCE WITH THE NEC. TEST ALL SYSTEMS, VERIFY ALL SYSTEMS OPERATE AS SPECIFIED IN SEQUENCE OF OPERATIONS, AND RECORD INITIAL SETTING AND OPERATING SET-POINTS IN O&M MANUALS. PROVIDE OPERATOR INTERFACE TO ALLOW FOR LOCAL SCHEDULE ADJUSTMENT, SET-POINT ADJUSTMENT, AND HVAC MONITORING. PROVIDE TAMPERPROOF THERMOSTAT GUARDS IN ALL PUBLIC AREAS. PROVIDE CONTROL SYSTEM DEMONSTRATION TO OWNERS REPRESENTATIVE(S) PRIOR TO SUBSTANTIAL COMPLETION.

PROVIDE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT. PROVIDE ACCESS DOORS FOR ALL EQUIPMENT INSTALLED IN CONCEALED LOCATIONS.

INSTALL ALL EQUIPMENT WHERE SHOWN IN PLANS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE MISCELLANEOUS APPURTENANCES, ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES

PROVIDE ISOLATION VALVES AT EACH FIXTURE, AND GAS ISOLATION VALVE AT EACH GAS APPLIANCE. BRONZE TWO PIECE BODY, FULL PORT, FORGED BRASS, CHROME PLATED BALL, TEFLON SEATS AND STUFFING BOX RING, BLOW-OUT PROOF STEM, LEVER HANDLE,SOLDER OR THREADED ENDS.

ALL HANGERS AND SUPPORTS SHALL BE INSTALLED IN ACCORDANCE WITH 2021 UPC, INSTALLED AS PER THE MANUFACTURES INSTRUCTIONS. PROVIDE SEISMIC SUPPORT FOR ALL PIPING SYSTEMS IN ACCORDANCE WITH IBC 2021.

INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING SIZE 1.5" AND LARGER, COMPLETE WITH VAPOR BARRIER JACKET AND PLASTIC COVER FOR FITTINGS. INSULATE PLUMBING VTR'S DOWN 3" FROM ROOF WITH 1" FIBERGLASS PIPE INSULATION. INSULATE RAINWATER ROOF DRAIN PIPING EXCEPT VERTICAL EXPOSED RAINWATER PIPING IN SERVICE AREAS. INSULATE RAINWATER ROOF DRAIN PIPING WITH 1" FIBERGLASS INSULATION, COMPLETE WITH VAPOR SEAL ON ALL PIPING ABOVE GRADE. INSULATE SUPPLY AND WASTE PIPING AT ADA ACCESSIBLE LAVATORIES WITH CELLULAR FOAM, PREFORMED FOR P-TRAP AND HOT WATER ANGLE STOP AND SUPPLY TUBE.

NATURAL GAS PIPING  
 STEEL PIPE: ASTM A53, SCHEDULE 40 BLACK  
 FITTINGS: ASME B16.3 MALLEABLE IRON OR ASTM A234/A234M FORGED STEEL WELDING TYPE.  
 JOINTS: NFPA 54 SCREWED FOR LOW PRESSURE PIPE TWO INCHES AND UNDER OR MEDIUM PRESSURE OUTSIDE OF BUILDINGS, ANSI B31.1 WELDED FOR PIPE OVER 2" OR FOR MEDIUM PRESSURE INSIDE OF BUILDINGS.

PLUMBING FIXTURE SCHEDULE											
SYMBOL	MANUFACTURER	MODEL	DESCRIPTION	MOUNTING	CW	HW	WASTE	VENT	TRAP	COLOR	SPECIFICATIONS
WC-1	PROFLO	PF1403T	WATER CLOSET	FLOOR	1/2"	---	3"	2"	---	WHITE	TWO PIECE TOILET, ELONGATED BOWL, 17" RIM HEIGHT, ICC/ANSI A117.1 ADA REQUIREMENTS OR APPROVED EQUAL.
LAV-1	KOHLER	K-2196	LAVATORY	COUNTER	1/2"	1/2"	1-1/2"	1-1/4"	1-1/2"	WHITE	PENNINGTON DELTA 501-HDF FAUCET, GRID STRAINER, VANDAL RESTRAINT 1.5 GPM AERATOR, MUST MEET ADA IF ADA UNIT OR APPROVED EQUAL.
LAV-2	AMERICAN STANDARD	DECLYN	LAVATORY	COUNTER	1/2"	1/2"	1-1/2"	1-1/4"	1-1/2"	WHITE	AMERICAN STANDARD 0321026.020 DECLYN 18 1/2" X 17" WHITE VITREOUS CHINA WALL-MOUNT LAVATORY WITH 4" CENTERSET AND WALL HANGER OR APPROVED EQUAL.
FD-1	J.R. SMITH	2005	FLOOR DRAIN	FLOOR	---	---	3"	2"	3"	---	FLOOR DRAIN, ROUND TOP TRAP PRIMER CONNECTION, OR APPROVED EQUAL.
HB-1	WOODFORD	B65-CH	KITCHEN SINK	DROP IN	3/4"	---	---	---	---	CHROME	WOODFORD MODEL B65-CH FOR HOSE BI-EXTERIOR CHROME, FREEZE-LESS, ANTI-SIPHON VACUUM BREAKER, METAL HANDLE, LOCKING WALL BOX, OR APPROVED EQUAL.
TUB-1	STERLING	ENSEMBLE	TUB KIT	FLOOR	1/2"	1/2"	2"	1-1/2"	2"	WHITE	ENSEMBLE MEDLEY 60 IN. X 31.125 IN. X 74.25 IN. 4-PIECE TONGUE AND GROOVE TUB WALL IN WHITE OR APPROVED EQUAL.
DW-1	FRIGIDAIRE	FFCD2413US	DISHWASHER	FLOOR	---	1/2"	---	---	---	SS	FRIGIDAIRE 60-DECIBEL FILTRATION BUILT-IN DISHWASHER (STAINLESS STEEL) (COMMON: 24-IN; ACTUAL: 24-IN) ENERGY STAR, OR APPROVED EQUAL.
WB-1	IPS CORP	GUY GREY	WASHER BOX	WALL	1/2"	1/2"	2"	1-1/2"	2"	WHITE	IPS CORP GUY GRAY WASHER BOX, OR APPROVED EQUAL.
KS-1	ELKAY	DAYTON	KITCHEN SINK	DROP IN	1/2"	1/2"	2"	1-1/2"	2"	SS	DAYTON DROP-IN STAINLESS STEEL 33 IN 3 HOLE DOUBLE BOWL SINK, OR APPROVED EQUAL.
BRS-1	ELKAY	DAYTON	KITCHEN SINK	DROP IN	1/2"	1/2"	2"	1-1/2"	2"	SS	DAYTON STAINLESS STEEL 25" X 22" X 6-9/16" 1-HOLE SINGLE BOWL DROP-IN SINK, OR APPROVED EQUAL.

BOILER SCHEDULE						
SYMBOL	MANUFACTURER	MODEL	BTU INPUT (MBH)	BTU OUTPUT (MBH)	AFUE %	SPECIFICATIONS
B-1	LOCHINVAR	WHB285	285	264	95	LOCHINVAR KNIGHT FIRE TUBE BOILER, 27.0 GPM FLOW RATE, 2.4 FT HD., 1-1/4" CONNECTIONS, 3" VENT, OR APPROVED EQUAL.

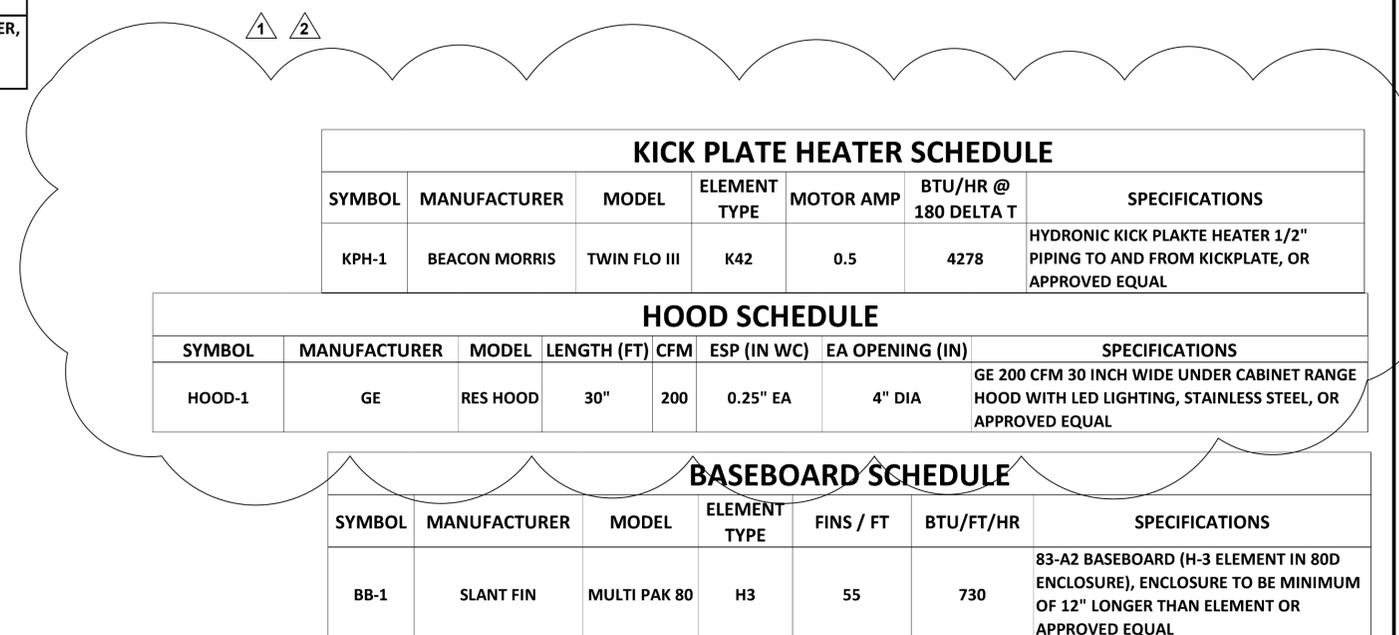
PUMP SCHEDULE						
SYMBOL	MANUFACTURER	MODEL	GPM	FT HD	VOLTS/HZ/PHASE	SPECIFICATIONS
BSP-1	GRUNDFOS	UPS26-99F	40	2.4	230V/60HZ/1Ø	BOILER CIRC PUMP, GRUNDFOS OR APPROVED EQUAL.
WSP-1	GRUNDFOS	UPS15-58FC	14	6.5	230V/60HZ/1Ø	HOT WATER HEATER CIRCULATION LOOP PUMP, GRUNDFOS OR APPROVED EQUAL.
BPP-1	GRUNDFOS	MAGNA1 40-80 GF	44	14	120V/60HZ/1Ø	PRIMARY HEATING LOOP PUMP, GRUNDFOS OR APPROVED EQUAL.
HWCP-1	GRUNDFOS	UPS15-55 SFC	1	15	120V/60HZ/1Ø	HOT WATER RECIRC PUMP, GRUNDFOS OR APPROVED EQUAL.

WATER HEATER SCHEDULE						
SYMBOL	MANUFACTURER	MODEL	STORAGE (GAL)	BTU INPUT (MBH)	RECOVERY @ 100 DEG RISE	SPECIFICATIONS
WH-1	LOCHINVAR	SIT119	113	199	308 GPH	LOCHINVAR STAINLESS STEEL INDIRECT WATER HEATER, 14.0 GPM FLOW RATE, 6.5 FT HD. OR APPROVED EQUAL.

EXHAUST FAN SCHEDULE							
SYMBOL	MANUFACTURER	MODEL	WATTS	ESP (IN WC)	CFM	VOLTS/HZ/PHASE	SPECIFICATIONS
EF-1	PANASONIC	FV-0510VS1	4.4	0.1	50	120V/60HZ/1Ø	WHISPERFITEZ FAN 50/80/100 CFM, 0.09 A, OR APPROVED EQUAL.

EXPANSION TANK SCHEDULE					
SYMBOL	MANUFACTURER	MODEL	FUNCTION	TANK VOLUME	SPECIFICATIONS
ET-1	THERM-X-TROL	ST-5C	HOT WATER	2 GALLONS	MAX OPERATING TEMPERATURE MAX WORKING PRESSURE 150 PSIG, PRECHARGE PRESSURE 55 PSIG. OR APPROVED EQUAL.
BET-1	THERM-X-TROL	AX-15(V)	BOILER	8.6 GALLONS	MAX OPERATING TEMPERATURE MAX WORKING PRESSURE 150 PSIG, PRECHARGE PRESSURE 55 PSIG. OR APPROVED EQUAL.

FRESH AIR INLET SCHEDULE					
SYMBOL	MANUFACTURER	MODEL	SIZE	USE	SPECIFICATIONS
FAI-1	THERMA-STOR	FRESH	70	OA	FRESH 80 AIR INLET OR APPROVED EQUAL.



FANS SEQUENCE OF OPERATION

EF-1: BATHROOM ROOM EXHAUST. FAN IS EITHER ON OF OFF BASED UPON ROOM OCCUPANCY. IF LIGHT IS ON FAN IS ON IF LIGHT IS OFF FAN IS OFF.

WH-1: WATER HEATER TO HAVE INTEGRAL AQUASTAT AND SHALL OPERATE TO MAINTAIN 120 DEG F SETPOINT FOR FIXTURES.

B-1 AND WH-1 SYSTEM TO BE CONTROLLED WITH BOILER SYSTEM CONTROLS WITH HOT WATER PRIORITY PUMPS CONTROLLED THROUGH BOILER SYSTEM AS PER MANUFACTURERS RECOMMENDATION. ROOMS TO HAVE THERMOSTATS TO CONTROL ROOM SET TEMPERATURE.



7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
4/21/25

GIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504

REVISIONS:

- 4/14/25
- 4/21/25
- 
- 
- 

PROJECT NR: 2025-15

DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

M3.0



7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

PROJECT NR: 2025-15

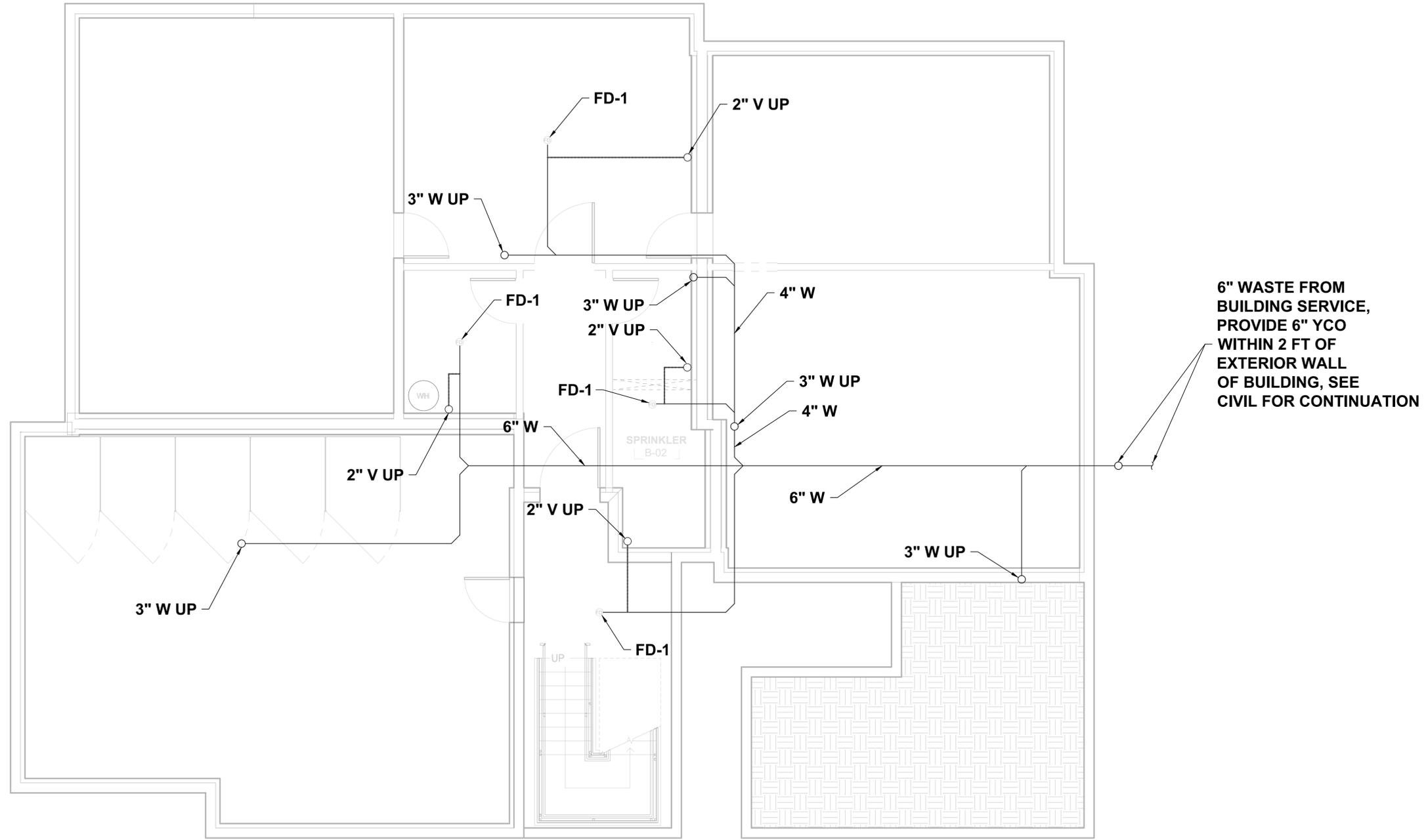
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

M4.0



1 WASTE/VENT BASEMENT PLAN  
1/4" = 1' - 0"





7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

PROJECT NR: 2025-15

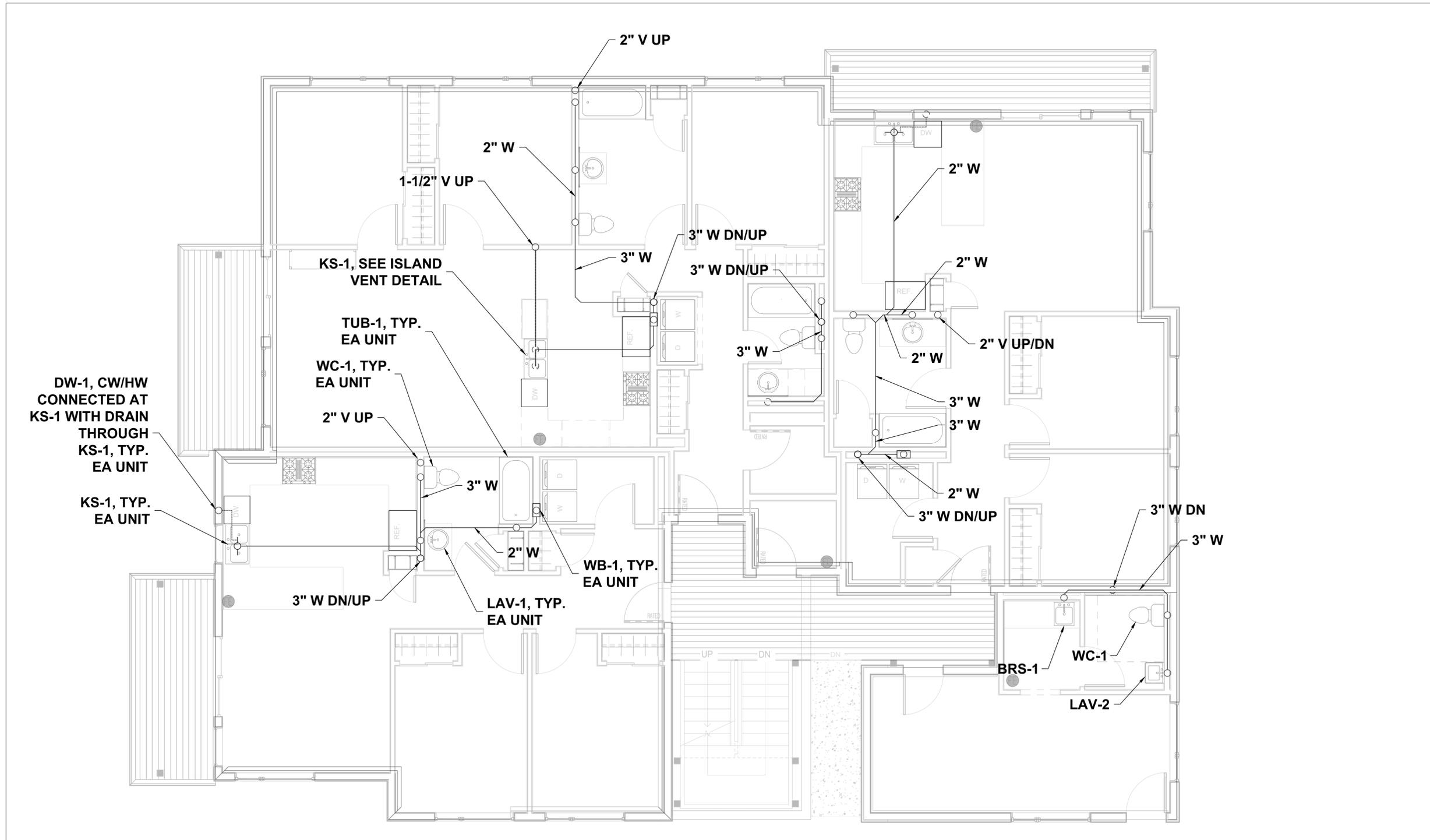
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M4.1**



**1 WASTE/VENT FIRST FLOOR PLAN**  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

PROJECT NR: 2025-15

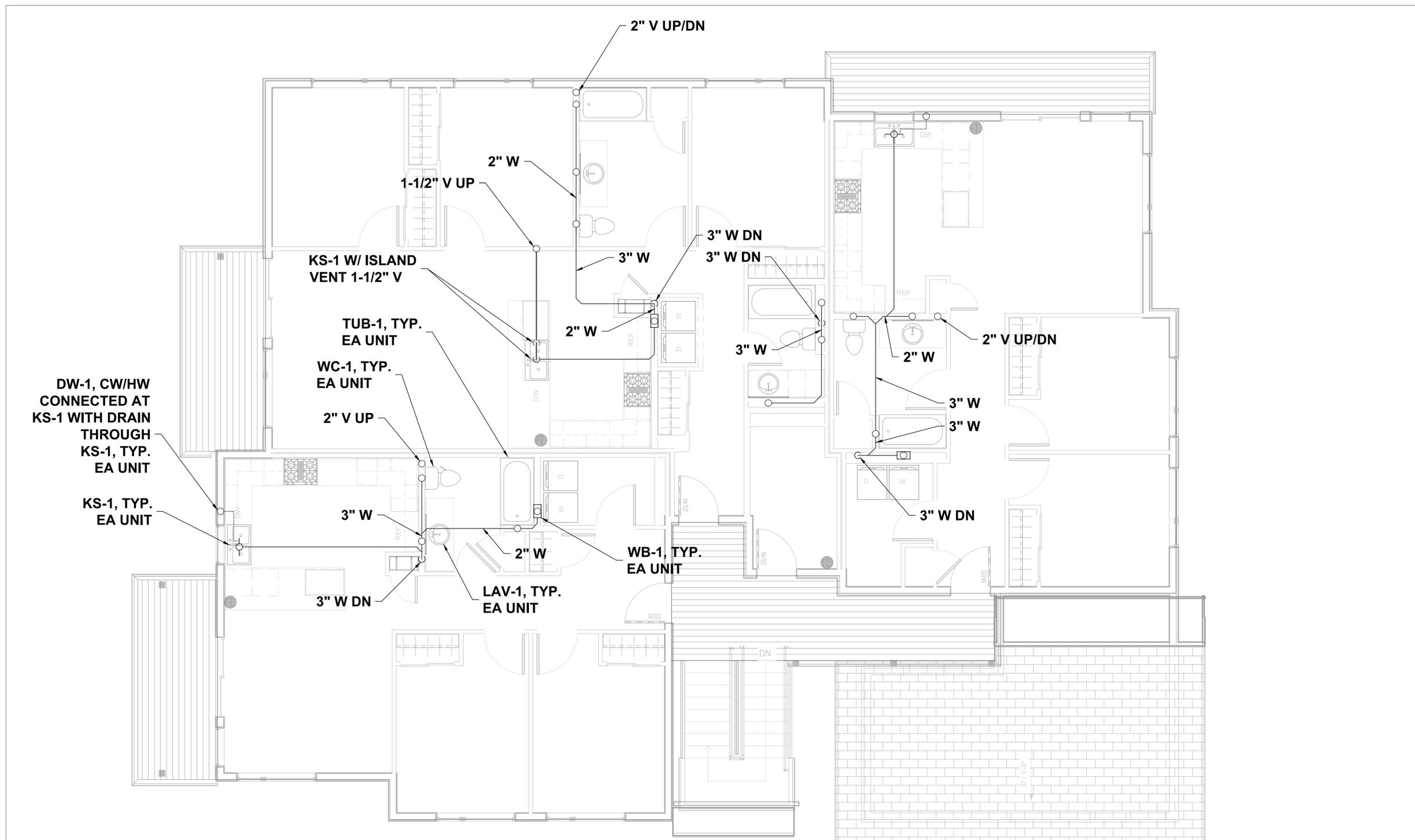
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M4.2**



**1 WASTE/VENT SECOND FLOOR PLAN**  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

PROJECT NR: 2025-15

DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M5.0**



**1 VENT BASEMENT PIPING PLAN**  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
4/14/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

1. 4/14/25
- 2.
- 3.
- 4.
- 5.

PROJECT NR: 2025-15

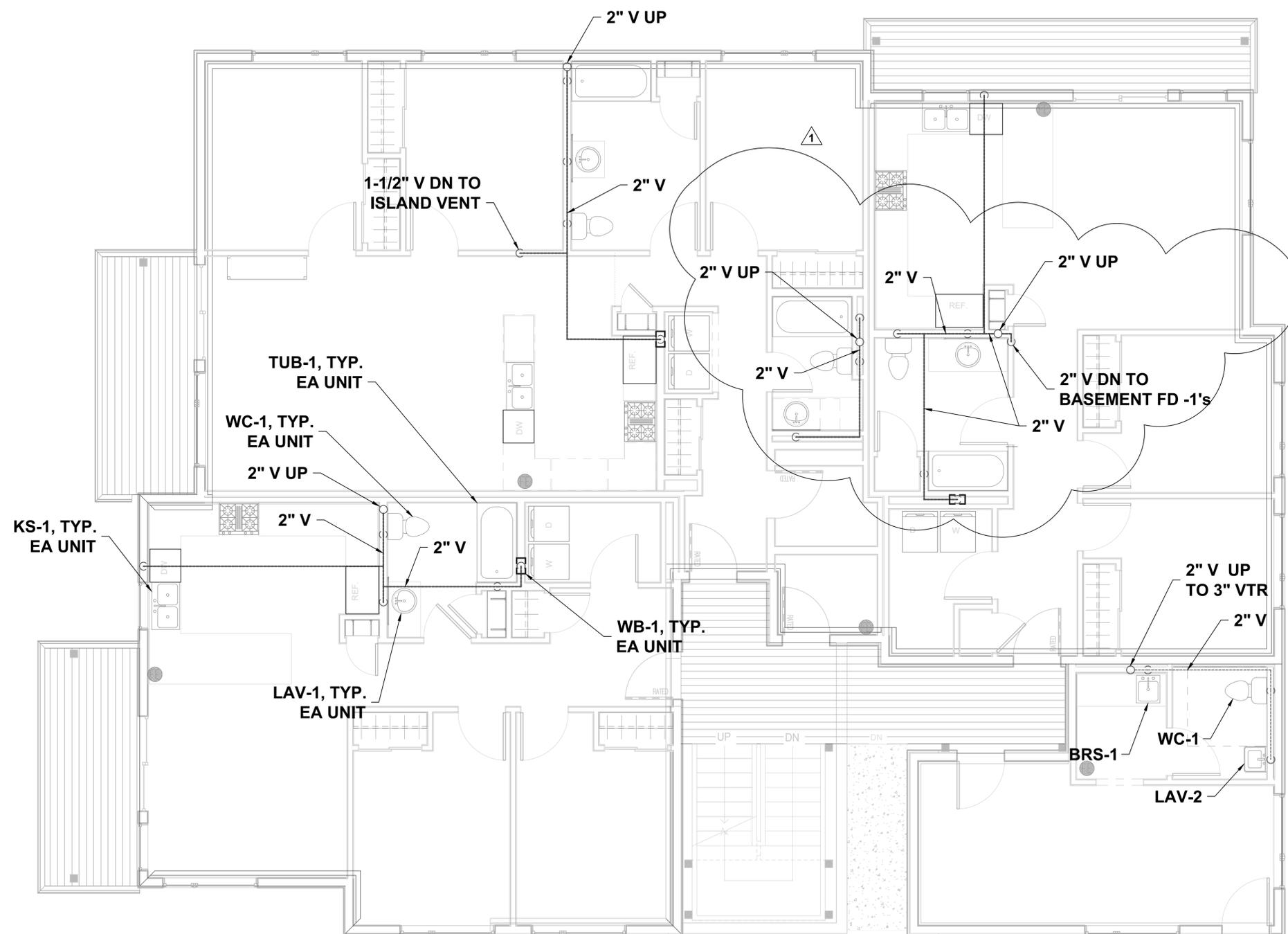
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M5.1**



**1 VENT FIRST FLOOR PIPING PLAN**  
1/4" = 1' - 0"









**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

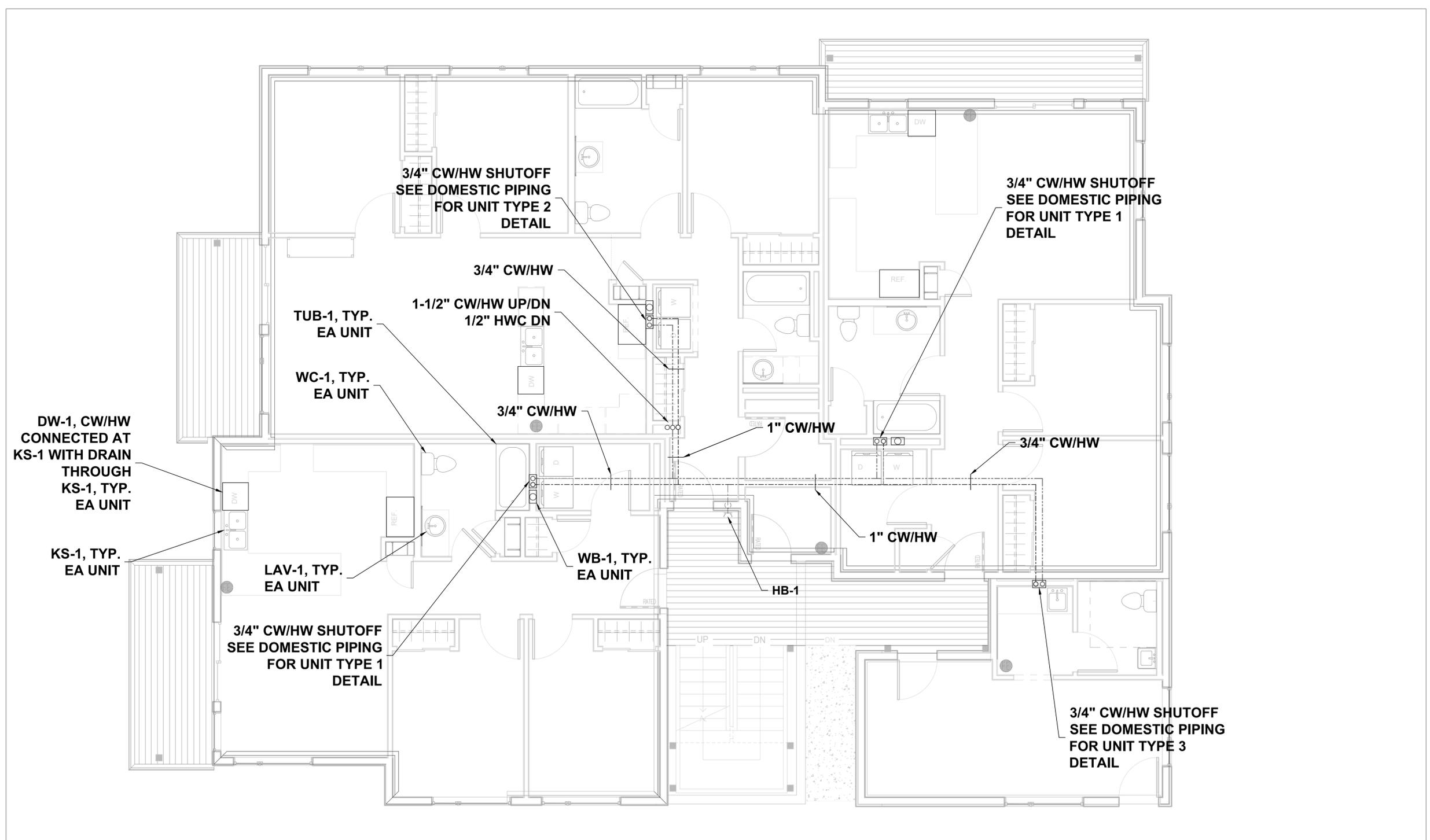
**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

**M6.1**



**1 DOMESTIC WATER FIRST FLOOR PIPING PLAN**  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
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- 3.
- 4.
- 5.

PROJECT NR: 2025-15

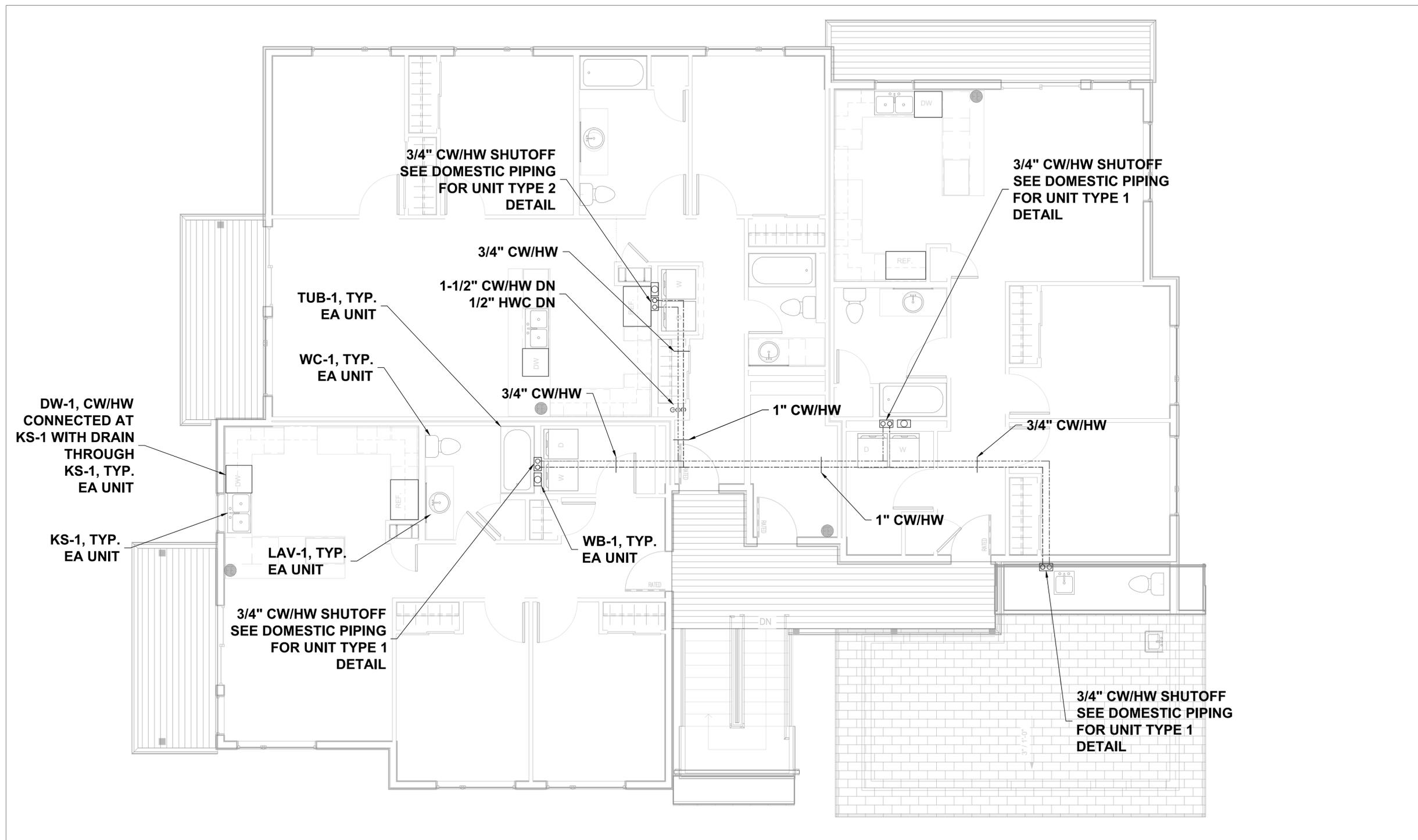
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M6.2**



**1 DOMESTIC WATER SECOND FLOOR PIPING PLAN**  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
3/23/25

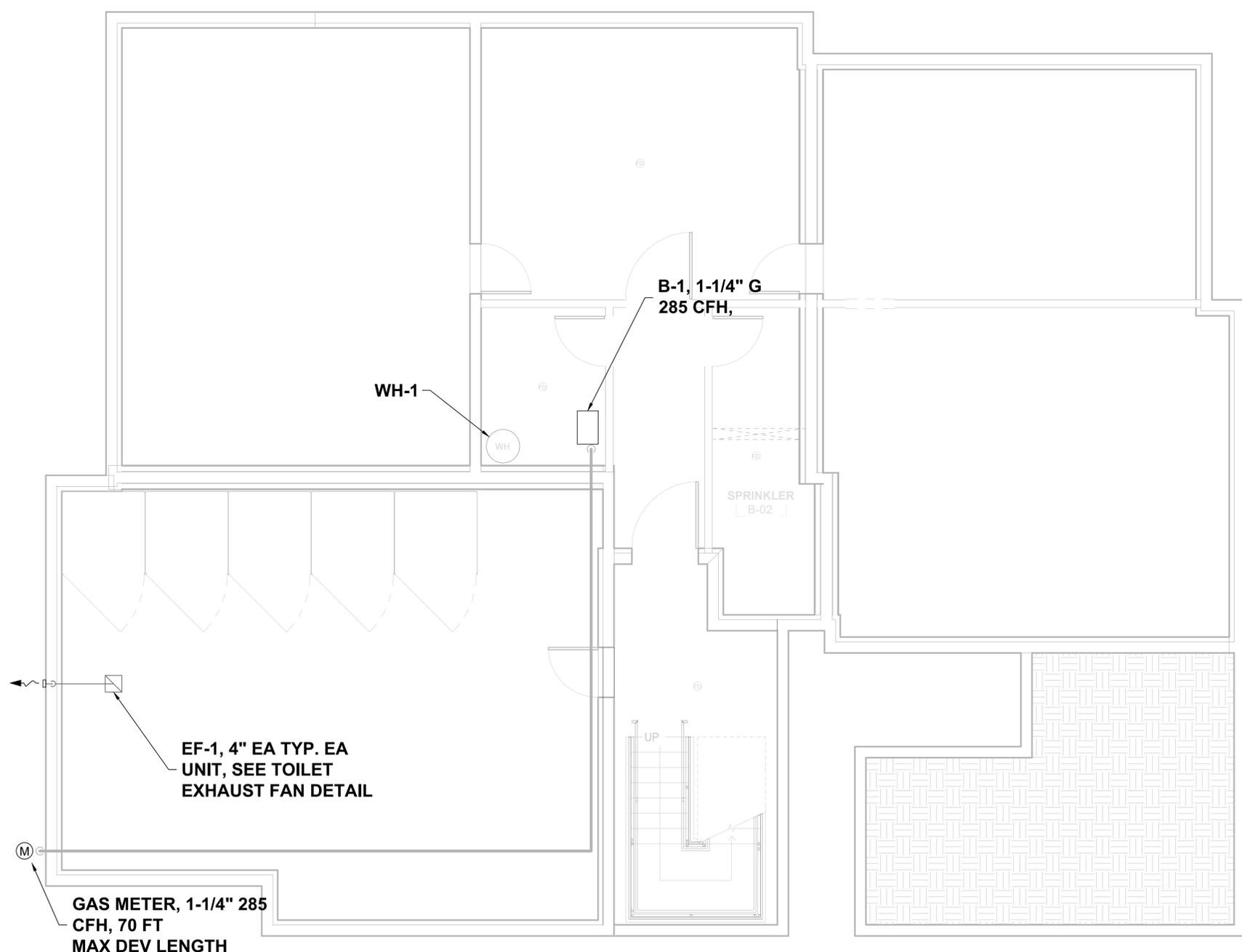
**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
- 2.
- 3.
- 4.
- 5.

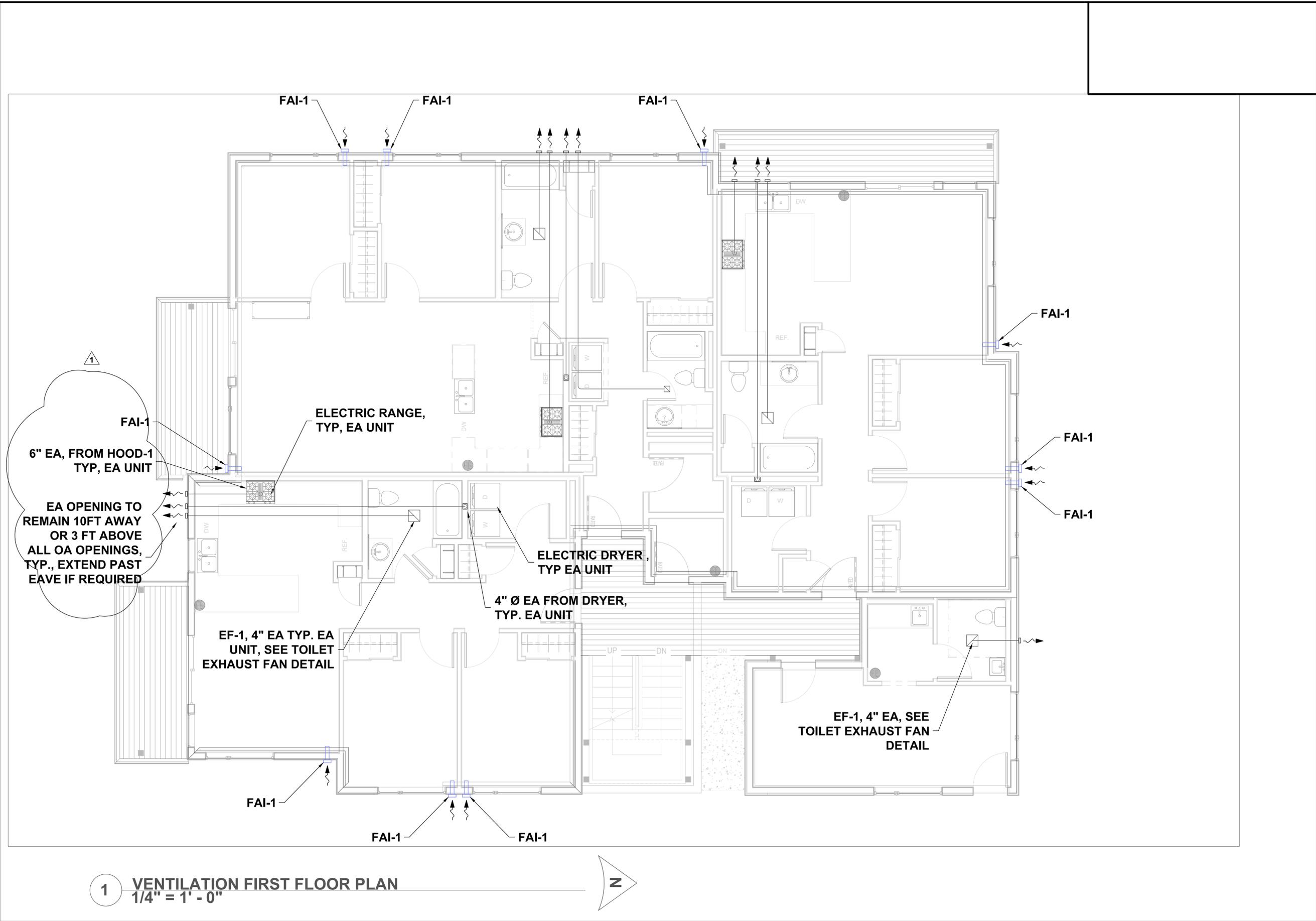
PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

**M7.0**



**1 VENTILATION AND GAS PIPING BASEMENT PLAN**  
1/4" = 1' - 0"





**CIHA BAXTER - BUILDING A**  
**ANCHORAGE, AK 99504**

REVISIONS:

1. 4/14/25
- 2.
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- 5.

PROJECT NR:	2025-15
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DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

**M7.1**



**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
4/14/25

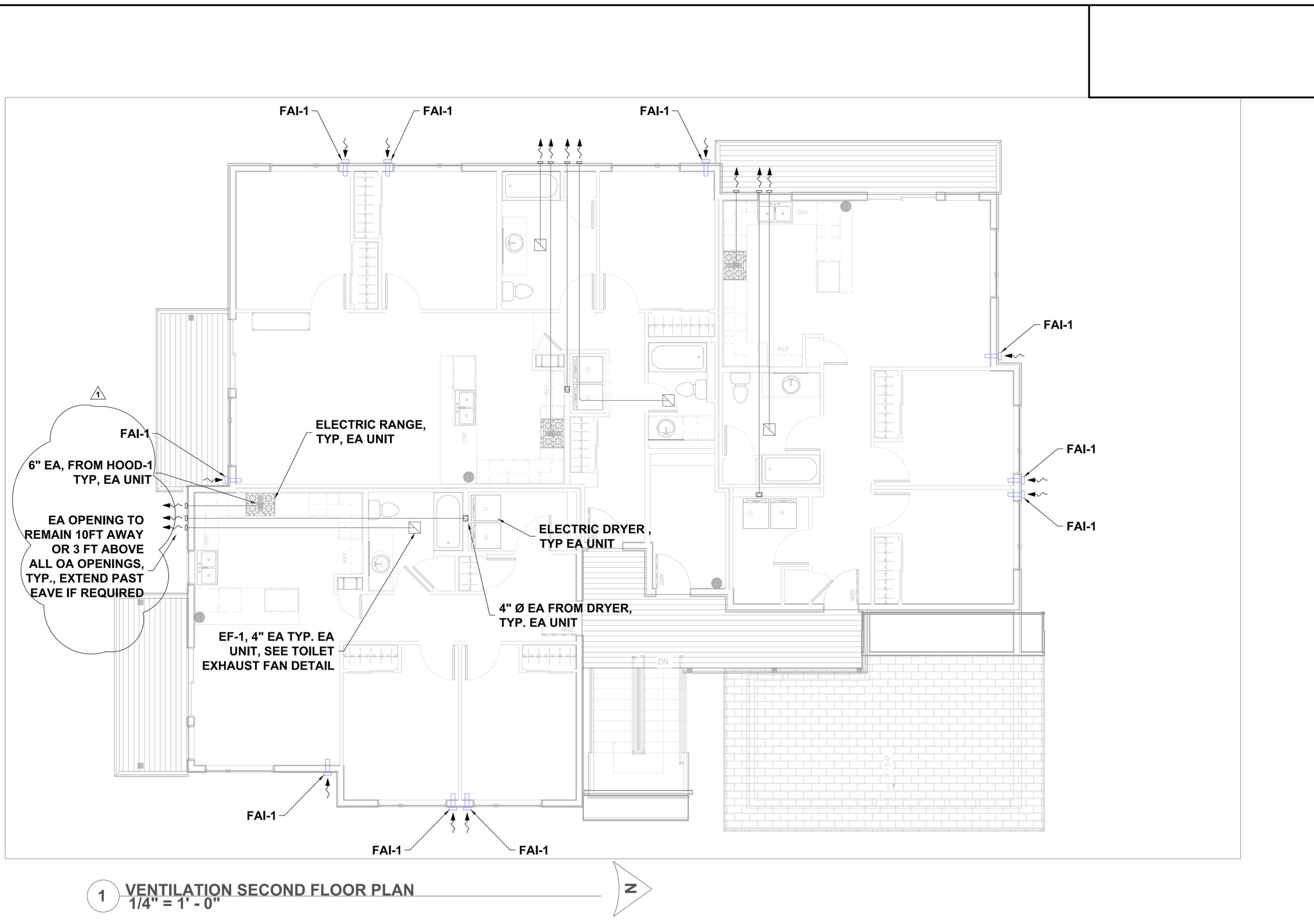
**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

**REVISIONS:**

- 1. 4/14/25
- 2.
- 3.
- 4.
- 5.

PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
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**M7.2**



**1 VENTILATION SECOND FLOOR PLAN**  
 1/4" = 1' - 0" N



7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
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CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504

REVISIONS:

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- 4.
- 5.

PROJECT NR: 2025-15

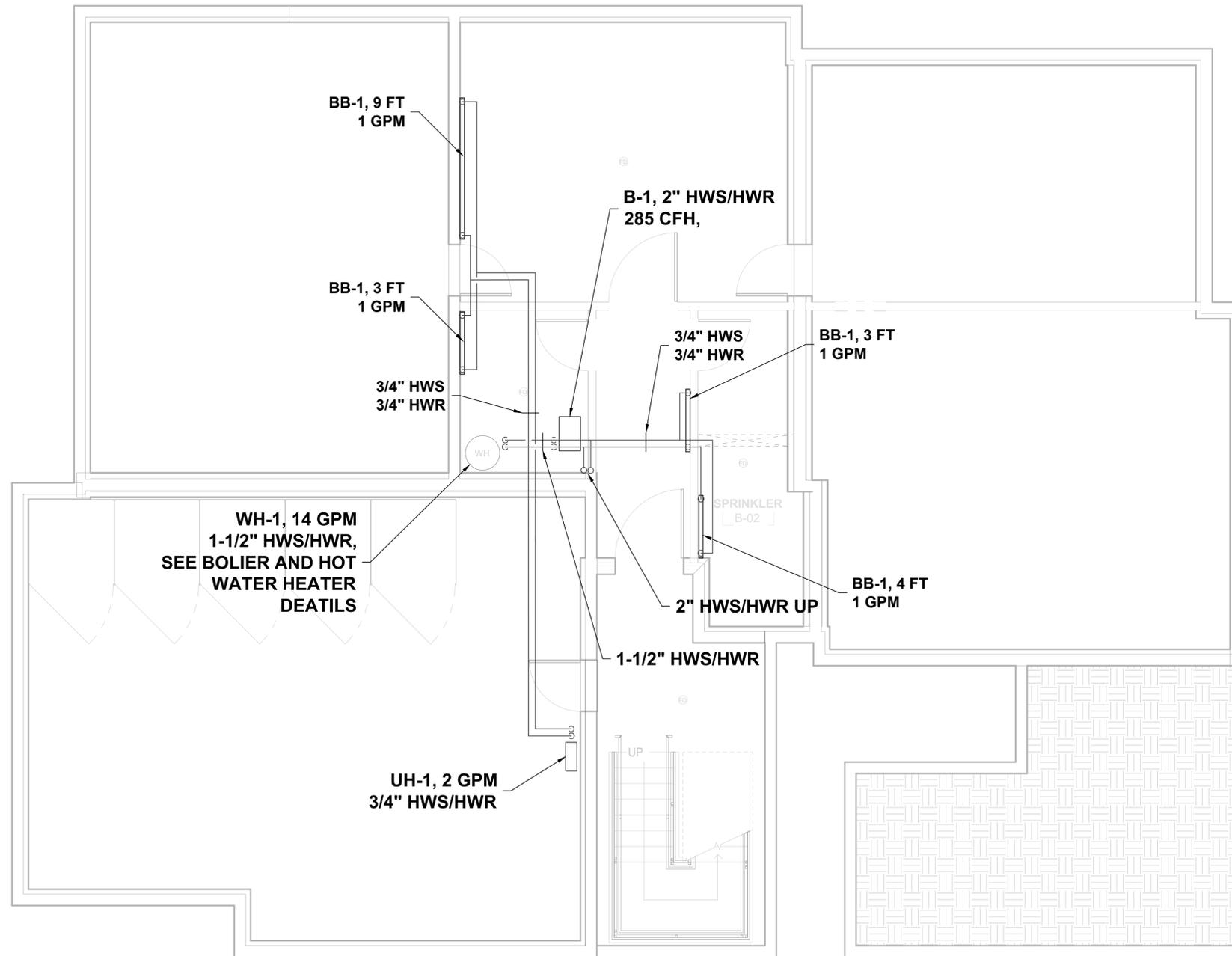
DATE: 3/23/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

M8.0



1 HEATING BASEMENT PLAN  
1/4" = 1' - 0"





**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



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4/21/25

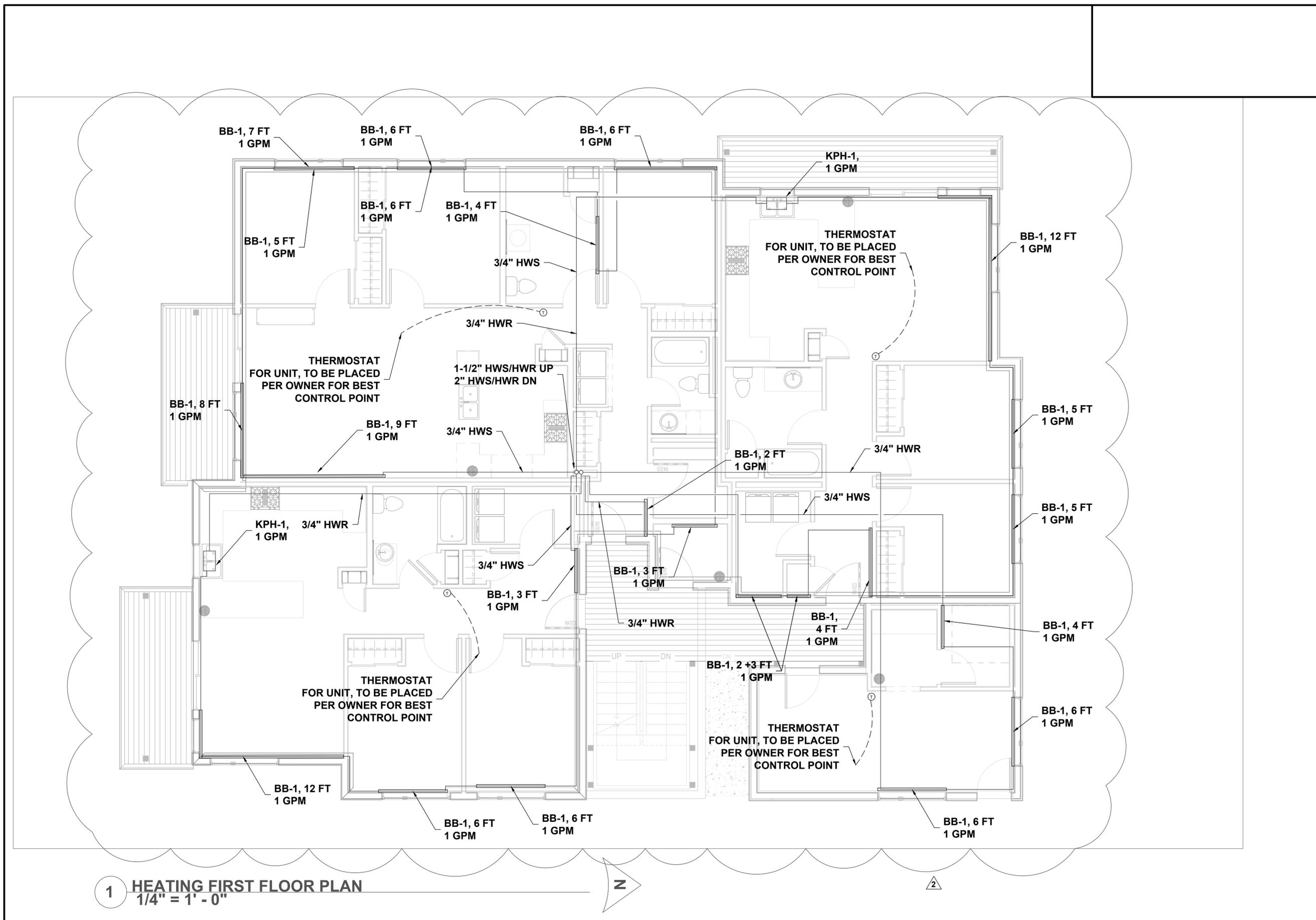
**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

- 1.
2. 4/21/25
- 3.
- 4.
- 5.

PROJECT NR:	2025-15
DATE:	3/23/25
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**M8.1**



**1 HEATING FIRST FLOOR PLAN**  
1/4" = 1' - 0"



**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



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4/21/25

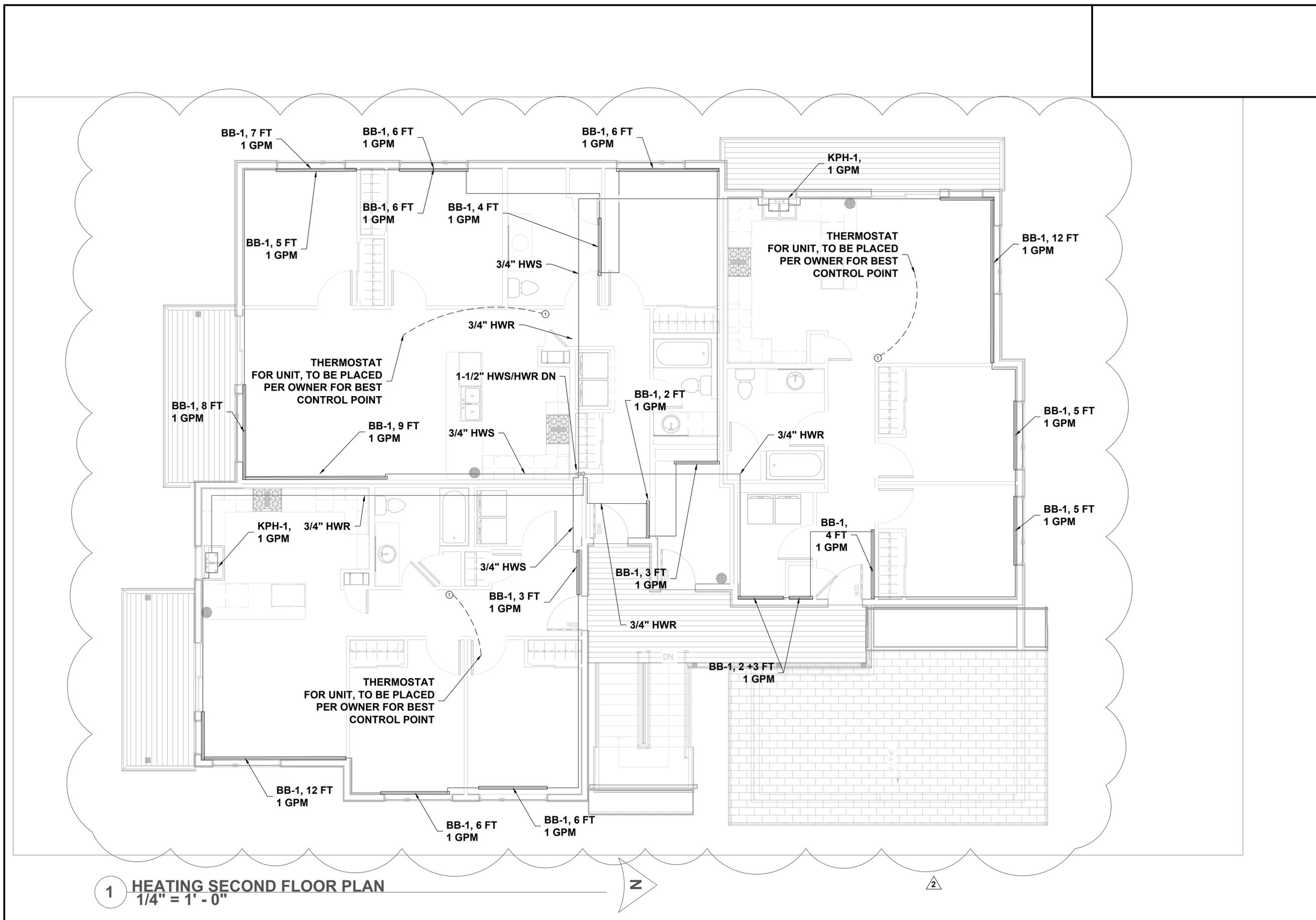
**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

REVISIONS:

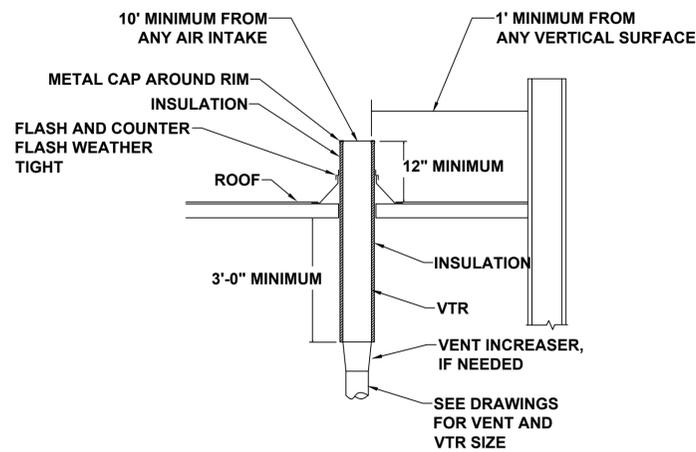
- 1.
2. 4/21/25
- 3.
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- 5.

PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

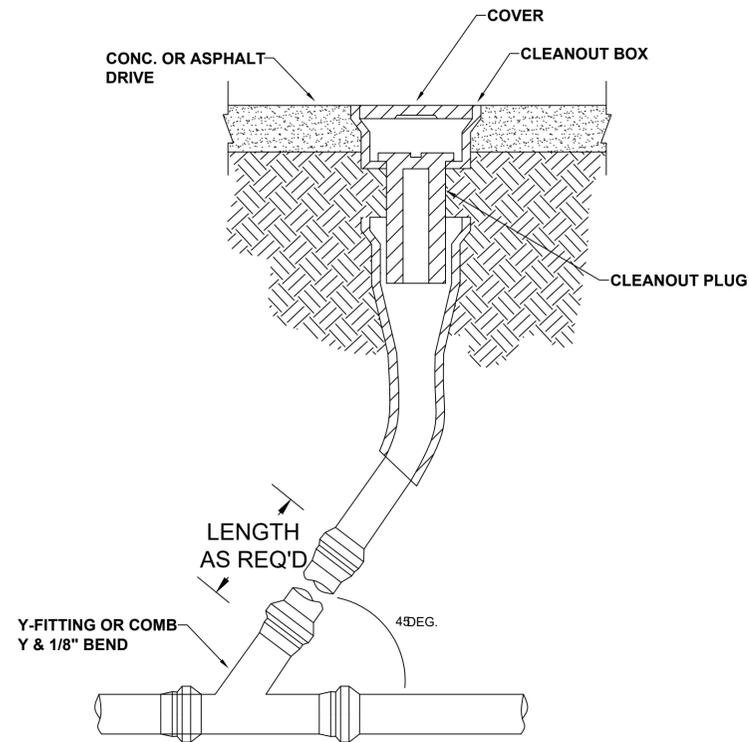
**M8.2**



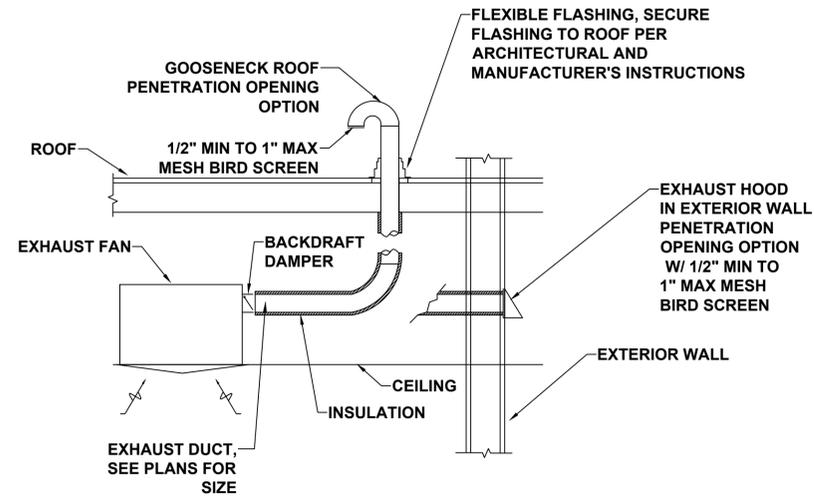
**1 HEATING SECOND FLOOR PLAN**  
1/4" = 1'-0"



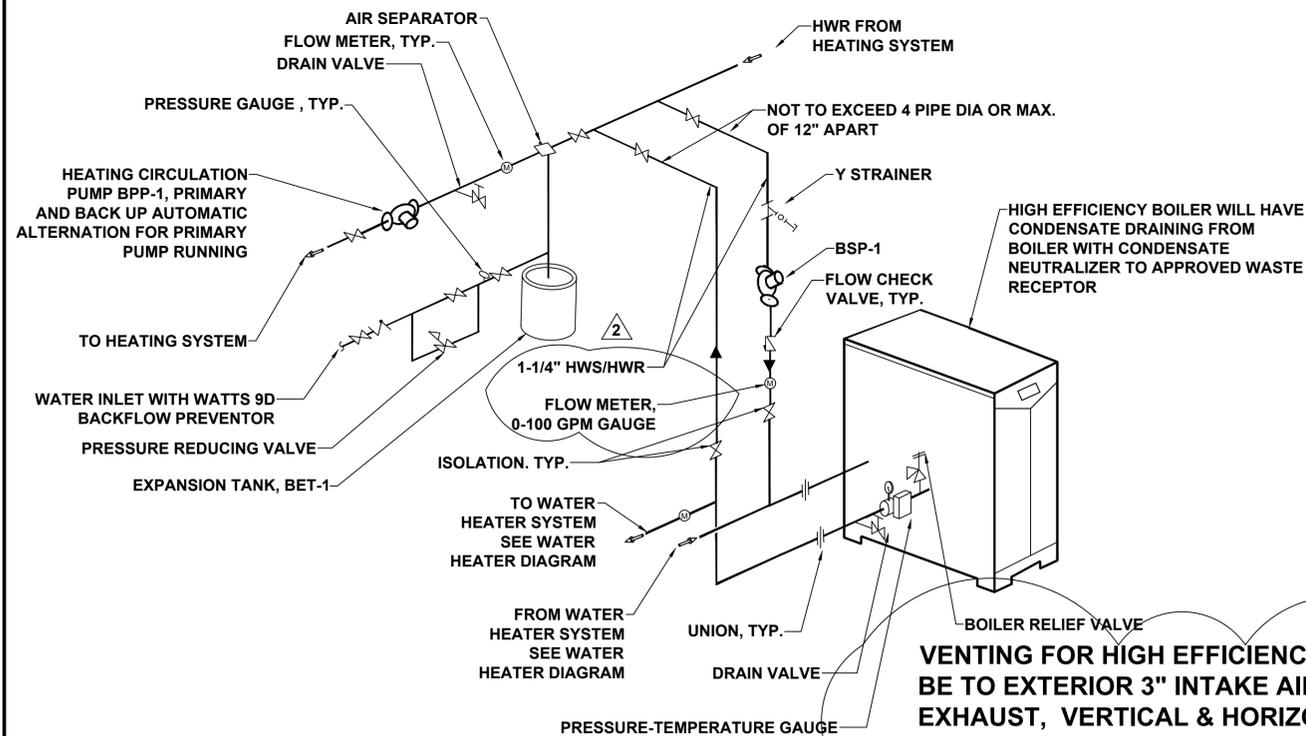
**1 PLUMBING VENT THRU ROOF DETAIL**  
NTS



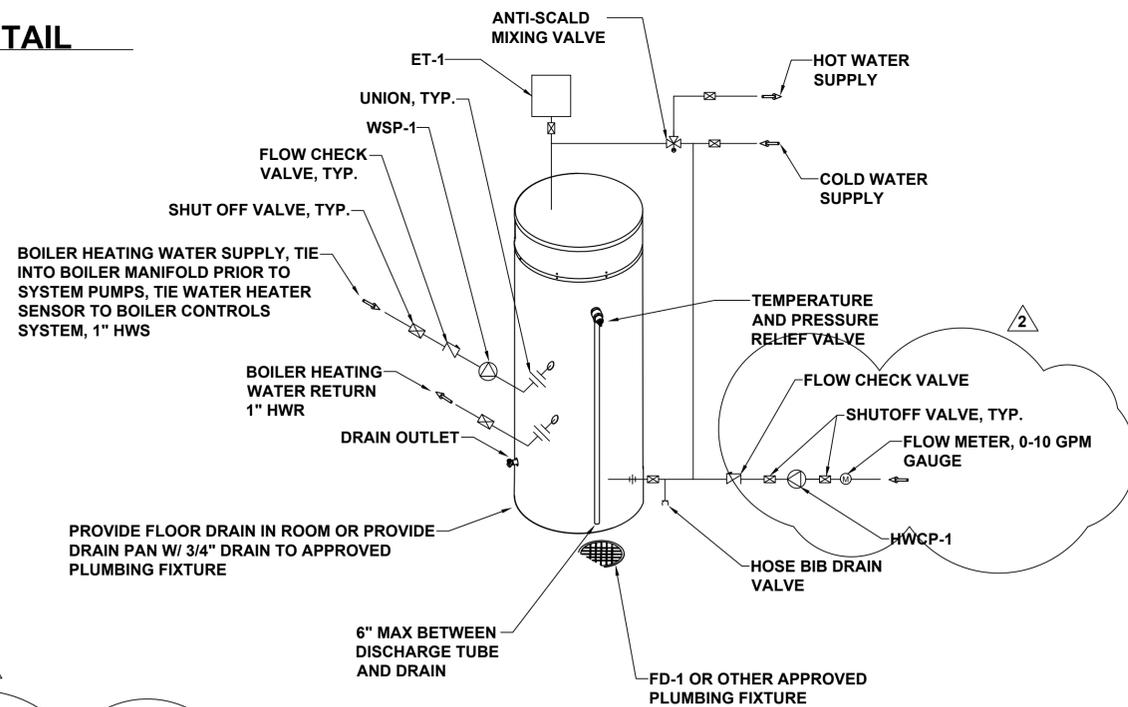
**2 YARD CLEANOUT DETAIL**  
NTS



**3 TOILET EXHAUST FAN DETAIL**  
NTS



**4 HIGH EFFICIENCY BOILER PIPING DIAGRAM**  
NTS



**5 WATER HEATER DIAGRAM**  
NTS

**VENTING FOR HIGH EFFICIENCY WILL BE TO EXTERIOR 3" INTAKE AIR AND 3" EXHAUST, VERTICAL & HORIZONTAL DIRECT VENT PVC, CPVC, POLYPROPYLENE OR SS VENTING UP TO 100 FEET, INSPECTOR TO VERIFY INSTALLATION**



7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



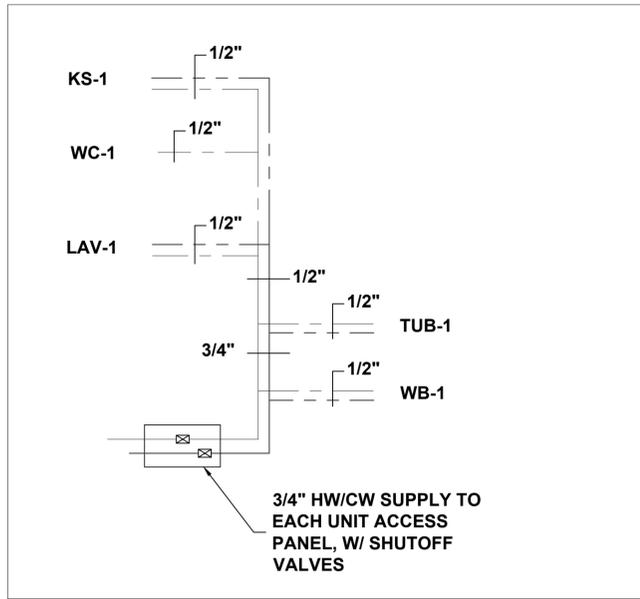
LIC # 101702  
4/21/25

**CIHA BAXTER - BUILDING A**  
**ANCHORAGE, AK 99504**

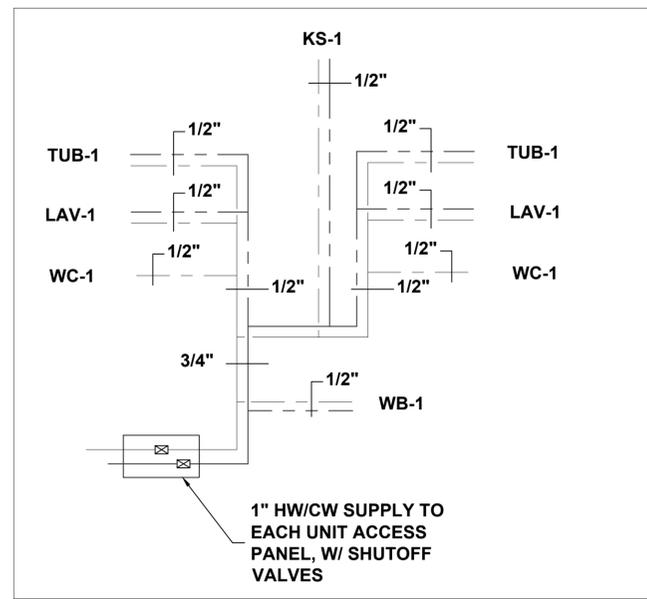
- REVISIONS:
- 4/14/25
  - 4/21/25
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PROJECT NR: 2025-15  
DATE: 3/23/25  
DRAWN BY: RJT  
SCALE: AS NOTED  
SHEET NUMBER:

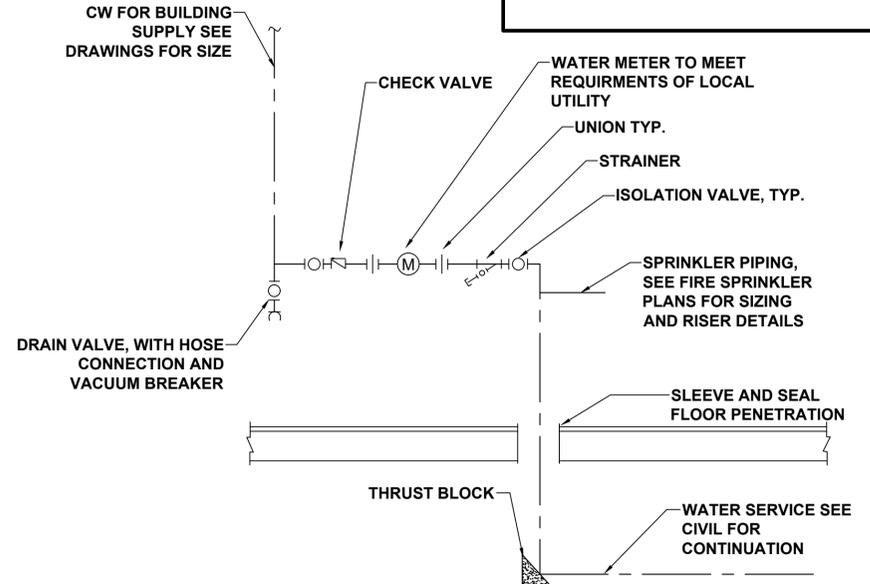
**M9.0**



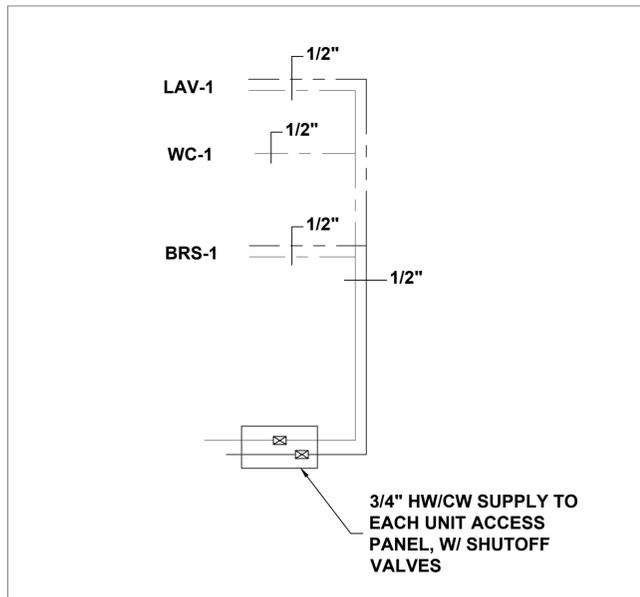
1 DOMESTIC PIPING DETAIL UNIT TYPE 1 NTS



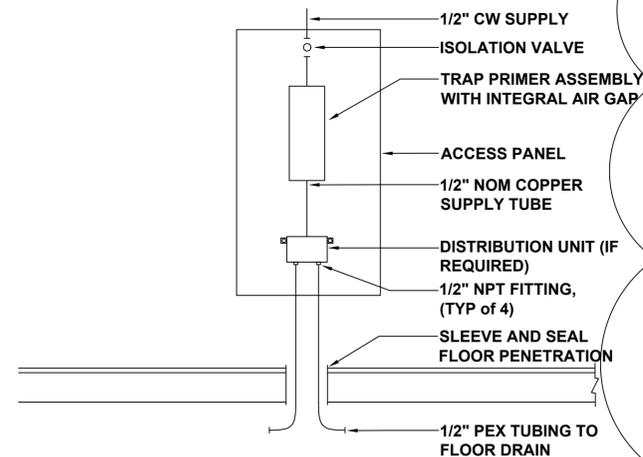
2 DOMESTIC PIPING DETAIL UNIT TYPE 2 NTS



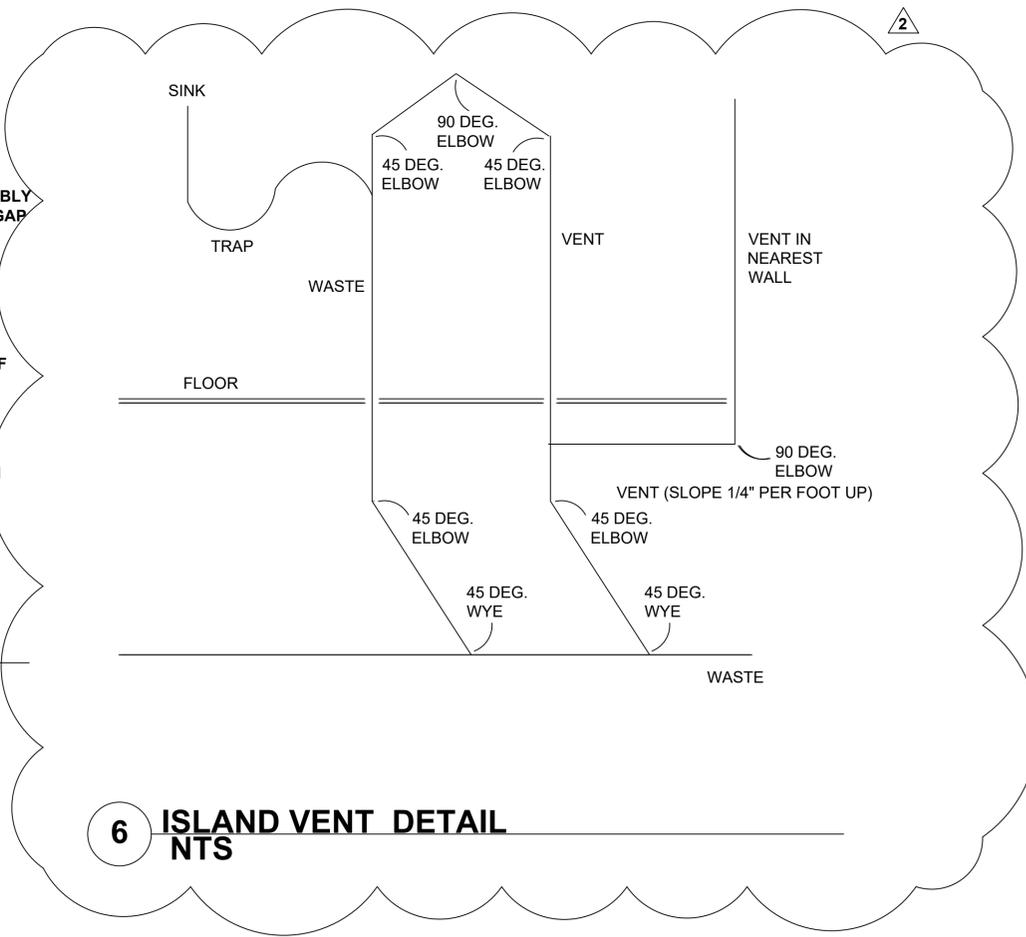
3 WATER SERVICE DETAIL NTS



4 DOMESTIC PIPING DETAIL UNIT TYPE 3 NTS



5 TRAP PRIMER DETAIL NTS



6 ISLAND VENT DETAIL NTS



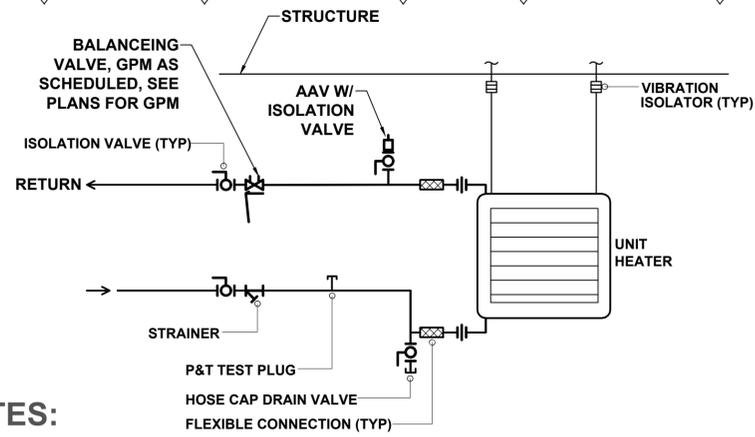
CIHA BAXTER - BUILDING A ANCHORAGE, AK 99504

REVISIONS:

1.	
2.	4/21/25
3.	
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PROJECT NR:	2025-15
DATE:	3/23/25
DRAWN BY:	RJT
SCALE:	AS NOTED
SHEET NUMBER:	

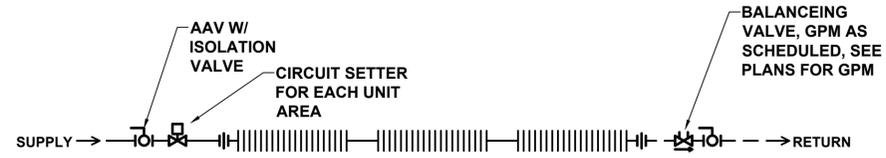
M9.1



**NOTES:**

1. ROUTE SUPPLY/RETURN PIPING FULL SIZE UP TO UNIT, SEE DRAWINGS FOR SIZE.
2. PROVIDE AAV W/ ISOLATION VALVE AT UNIT PIPING HIGH POINTS AND HOSE CAP DRAIN VALVE AT LOW POINTS.

**1 UNIT HEATER PIPING DETAIL  
NTS**

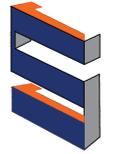


**NOTES:**

1. ROUTE SUPPLY/RETURN PIPING FULL SIZE UP TO BASEBOARD, SEE DRAWINGS FOR SIZE.
2. PROVIDE AAV W/ ISOLATION VALVE AT PIPING HIGH POINTS AND HOSE CAP DRAIN VALVE AT LOW POINTS.
3. SPACE HEATING THERMOSTAT SHALL MODULATE MOV TO MAINTAIN SELECTED SPACE TEMPERATURE.

**2 BASEBOARD DETAIL  
NTS**

2



**SCOPE**

7216 LAKE OTIS PKWY  
ANCHORAGE, AK 99507



LIC # 101702  
4/21/25

**CIHA BAXTER - BUILDING A  
ANCHORAGE, AK 99504**

**REVISIONS:**

- 1.
2. 4/21/25
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- 4.
- 5.

PROJECT NR: 2025-15

DATE: 4/21/25

DRAWN BY: RJT

SCALE: AS NOTED

SHEET NUMBER:

**M9.2**