MECHANICAL PROJECT GENERAL NOTES

(NOTES APPLY TO ALL SHEETS)

1. WORK TO BE ACCOMPLISHED ON THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE PROPER COMPLETION OF ALL MECHANICAL WORK.
2. EXISTENCE OF ANY WIRES, CONDUITS, PIPES, DUCTS, OR OTHER FACILITIES ARE SHOWN IN A GENERAL WAY ONLY. IT WILL BE THE DUTY OF THE CONTRACTOR TO VISIT THE SITE AND MAKE EXACT DETERMINATION OF THE EXISTENCE OF ANY SUCH FACILITIES PRIOR TO THE SUBMISSION OF HIS BID. IT IS UNDERSTOOD THAT HE WILL BE RESPONSIBLE FOR MAKING THE EXACT DETERMINATION OF THE LOCATION AND CONDITION OF SUCH FACILITIES.
3. ALL REQUIRED FEES, PERMITS, AND INSPECTIONS SHALL BE OBTAINED AND/OR ARRANGED FOR BY THE CONTRACTOR UNDER THE SECTION OF THE SPECIFICATIONS FOR WHICH THEY ARE REQUIRED.
4. REGULAR INSPECTIONS SHALL BE ARRANGED BY THE CONTRACTOR AS REQUIRED BY ANY AND ALL REGULATIONS. ALL CHARGES FROM REGULATING AGENCIES FOR INSPECTIONS OF INSTALLATIONS OR REVIEW OF PLANS AND SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR.
5. CERTIFICATE OF FINAL INSPECTION: UNDER EACH APPLICABLE SECTION OF THE SPECIFICATIONS, CONTRACTOR SHALL UPON COMPLETION OF THE WORK UNDER THAT SECTION, FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE ENGINEER FROM THE INSPECTION DEPARTMENT HAVING JURISDICTION.
6. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL CURRENT AND APPLICABLE CODES, SPECIFICATIONS, ORDINANCES, LAWS, REGULATIONS, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS.
7. IN CASE OF DIFFERENCE AMONG BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS AND THE CONTRACT DOCUMENTS, THE MOST STRINGENT SHALL GOVERN. CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DIFFERENCE.
8. ALL APPLICABLE FEDERAL, STATE, LOCAL LAWS, ORDINANCES, AND LOCAL CODE AMENDMENTS SHALL BE ADHERED TO THROUGHOUT THE CONSTRUCTION PROJECT. THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING THE APPLICABLE BUILDING CODE, THE APPLICABLE MECHANICAL CODE, AND THE APPLICABLE PLUMBING CODE.
9. NON-COMPLIANCE: SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING CODES, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS, AND UTILITY COMPANY REGULATIONS, HE SHALL BEAR ALL COSTS ARISING TO CORRECT THE DEFICIENCIES.
10. CONTRACTOR SHALL INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS REQUIRED FOR HIS WORK, INCLUDING REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
11. DRAWINGS ARE TO SCALE AS NOTED, BUT THE CONTRACTOR SHALL REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF PARTITIONS, WALLS, BEAMS, SHAFTS, EQUIPMENT, ETC.
12. EACH TRADE SHALL OBTAIN DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES AND COORDINATE HIS WORK WITH ALL OTHER TRADES.
13. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, AND APPURTENANCES AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. MECHANICAL WORK SHALL CONFORM TO THE REQUIREMENTS SHOWN ON ALL OF THE DRAWINGS. ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, AND ACCESSORIES THAT MAY BE REQUIRED.
14. DISCREPANCIES DISCOVERED BEFORE OR AFTER WORK HAS STARTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY AND THE ENGINEER RESERVES THE RIGHT TO REQUIRE MINOR CHANGES IN THE WORK OF ANY CONTRACTOR TO ELIMINATE SUCH DISCREPANCIES WITH NO CHANGE IN CONTRACT COST.
15. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS CALLED FOR IN EITHER ONE SHALL BE AS BINDING AS IF CALLED FOR IN BOTH.
16. WHERE A DISAGREEMENT EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE INCLUDED IN THE BID.
17. ALL MATERIALS AND EQUIPMENT SHALL BE STORED IN SUCH A PLACE AND IN SUCH A MANNER THAT A MINIMUM OF CONGESTION WILL RESULT. THE PLACING OF SUCH MATERIALS AND EQUIPMENT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
18. EACH CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES IN THE INSTALLATION OF EQUIPMENT, PIPING, CONDUIT, AND DUCTWORK.
19. CONTRACTORS SHALL SOLVE ALL COORDINATION CONFLICTS AMONG THEMSELVES WHEN POSSIBLE. ENGINEER WILL ARBITRATE WHEN NECESSARY, AND HIS JUDGMENT WILL STAND, WITH NO ADDITIONAL COST TO THE OWNER.
20. ACCESS PANELS SHALL BE FURNISHED BY THE TRADE REQUIRING THEM AND DELIVERED TO THE GENERAL CONTRACTOR FOR INSTALLATION.
21. EACH TRADE SHALL PERFORM ALL REMOVING, CUTTING, PATCHING, AND REPLACEMENT OF ALL BUILDING STRUCTURE, SURFACES, AND FINISHES NECESSARY IN ORDER TO PERFORM THE WORK, UNLESS SUCH WORK HAS BEEN DELEGATED TO THE GENERAL CONTRACTOR/ANOTHER TRADE. HOWEVER, SPECIAL PERMISSION SHALL BE OBTAINED FROM THE ENGINEER BEFORE CUTTING STRUCTURAL MEMBERS OR FINISHED MATERIALS. ALL PATCHING SHALL BE PERFORMED IN SUCH MANNER AS TO LEAVE NO VISIBLE TRACE AND TO RETURN THE PART AFFECTED TO THE CONDITION OF UNDISTURBED WORK. PATCHING WORK SHALL BE PERFORMED BY PERSONS EXPERIENCED, SKILLED, AND LICENSED FOR THE PARTICULAR TYPE OF WORK INVOLVED. INFERIOR WORK WILL NOT BE ACCEPTED. ALL HOLES IN MASONRY SHALL BE DRILLED WITH ROTARY DRILLS. IMPACT TOOLS SHALL NOT BE USED.
22. EACH TRADE SHALL BEAR THE EXPENSE OF ALL CUTTING, PATCHING, REPAIRING, OR REPLACING OF THE WORK OF OTHER TRADES REQUIRED BECAUSE OF HIS FAULT, ERROR, OR TARDINESS OF BECAUSE OF ANY DAMAGE DONE BY HIM.
23. EACH TRADE SHALL PROVIDE ALL HOLES AND OPENINGS REQUIRED FOR HIS WORK, UNLESS SUCH HOLES AND OPENINGS ARE SHOWN TO BE PROVIDED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
24. EACH TRADE SHALL PERIODICALLY CLEAR AWAY ALL DEBRIS, SURPLUS MATERIALS, ETC., RESULTING FROM HIS WORK OR OPERATIONS. LEAVING THE JOB AND THE EQUIPMENT FURNISHED UNDER ANY OR ALL CONTRACTS IN A CLEAN CONDITION.
25. EACH TRADE SHALL TEST THE EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THE SPECIFICATION AND SHALL DEMONSTRATE ITS PROPER OPERATION TO THE OWNERS OPERATING ENGINEER.
26. EACH TRADE SHALL FURNISH, WITHOUT ADDITIONAL EXPENSE TO THE OWNER, THE SERVICES OF COMPETENT INSTRUCTORS, WHO WILL GIVE FULL INSTRUCTION IN THE CARE, ADJUSTMENT, AND OPERATION AND MAINTENANCE OF ALL PARTS OF THE EQUIPMENT TO THE OWNER'S PERMANENT EMPLOYEES WHO ARE TO HAVE CHARGE OF THE EQUIPMENT.
27. ALL WOOD NAILERS AND OTHER LUMBER WHICH IS INSTALLED IN CONTACT WITH METAL, CONCRETE, OR MASONRY SHALL BE PRESSURE TREATED AGAINST DECAY (UNLESS OTHERWISE NOTED).
28. MATERIAL EXPOSED WITHIN RETURN AIR PLENUM CEILINGS SHALL COMPLY WITH APPLICABLE CODE.
29. PLANS DO NOT INCLUDE ALL OFFSETS FOR COORDINATION WITH DUCT, PIPING, LIGHTING, AND STRUCTURAL SYSTEMS. PROVIDE ALLOWANCES FOR REQUIRED OFFSETS. PROVIDE OFFSETS AS REQUIRED.
30. BEFORE SUBMITTING A PROPOSAL ON THE WORK SHOWN ON THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS, EACH BIDDER SHALL EXAMINE THE SITE, CHECK AS TO THE MEANS OF MAKING CONNECTIONS TO SERVICES, AND SHALL BECOME FAMILIAR WITH ALL THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING AS TO THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE PLAN OR SPECIFICATION FROM EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER DURING THE BID PERIOD SO CLARIFICATION CAN BE MADE BY ADDENDUM.
31. NORMAL USE OF THE FACILITY SHALL NOT BE DISTURBED, EXCEPT WITHIN THE IMMEDIATE CONSTRUCTION AREA. ALL WALKS, DRIVEWAYS, AND ENTRANCES SHALL BE KEPT CLEAR AND FREE OF ALL CONTRACTOR'S EQUIPMENT, MATERIAL, AND DEBRIS AT ALL TIMES.
32. CONTRACTOR SHALL THOROUGHLY EXAMINE THE EXISTING BUILDING WITH REGARD TO WHAT TEMPORARY MEASURES HE MUST TAKE IN ORDER TO PERMIT THE OWNER TO OCCUPY SPECIFIC AREAS OF THE BUILDING DURING THE VARIOUS CONSTRUCTION PHASES. REFER TO DIVISION 1, SECTION 1010, "SUMMARY OF WORK" FOR CONSTRUCTION SEQUENCING SCHEDULE. IN GENERAL, SYSTEMS MUST REMAIN IN USE IN THOSE DESIGNATED AREAS TO PERMIT THE OWNER TO FUNCTION IN A PRE-CONSTRUCTION MANNER.
33. EACH TRADE SHALL REMOVE EXISTING WORK THAT IS SHOWN, SPECIFIED, OR OBVIOUSLY NECESSARY FOR COMPLETION OF HIS WORK. OWNER SHALL HAVE THE OPTION OF RETAINING ANY ITEM OR MATERIAL REMOVED UNDER THIS CONTRACT. ITEMS OR MATERIALS NOT RETAINED BY OWNER SHALL BECOME THE PROPERTY OF THE TRADE AND SHALL BE REMOVED FROM THE PREMISES.

HVAC GENERAL NOTES

1. HVAC/SHEET METAL CONTRACTOR SHALL INITIATE THE COORDINATION PROCESS BY PROVIDING REPRODUCIBLE PLAN DRAWINGS SHOWING DUCTWORK AND EQUIPMENT. DRAWINGS WILL BE FORWARDED TO THE PIPING CONTRACTOR AND ELECTRICAL CONTRACTOR FOR INCLUSION OF THEIR SYSTEMS WORK.
2. ALL FLEX DUCT MUST BE INSTALLED PER THE ADC (AIR DIFFUSION COUNCIL) INSTALLATION STANDARDS (MOST CURRENT EDITION), INCLUDING A BEND RADIUS OF ONE DUCT DIAMETER OR GREATER, PROPERLY SEALED AND SECURED WITH 2 INCH MASTIC OR LARGE, PROPERLY SUPPORTED AND FULLY EXTENDED DUCT. FAN CALCULATIONS FOR THIS PROJECT WERE SIZED FOR A FOOT MAXIMUM FLEX DUCT INSTALLED PER THE ADC INSTALLATION STANDARDS. FLEX DUCT SHOWN ON PLANS IS FOR SCHEMATIC PURPOSES ONLY AND SHALL IN NO INSTANCE EXCEED 4 FOOT.
3. HVAC CONTRACTOR SHALL LINE THE INSIDE OF ALL RETURN/RELIEF/EXHAUST PLENUM BOXES PER SPECIFICATIONS. IF NO LINING IS REQUIRED, HVAC CONTRACTOR SHALL PAINT THE INSIDE FLAT BLACK.
4. HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR TESTED AND RATED FIRE STOP SYSTEMS FOR ALL THRU PENETRATIONS OF THE WALLS, FLOORS, AND ROOF ASSEMBLIES RESULTING FROM PIPING AND OTHER WORK UNDER HIS CONTRACT. REFER TO SPECIFICATION SECTION 07841 - FIRESTOPPING FOR REQUIREMENTS.
5. ALL DUCT SIZES ARE INTERNAL DIMENSIONS. CONTRACTOR SHALL INCREASE SHEET METAL SIZE IF DUCT RECEIVES INTERNAL LINER. SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS.
6. DUCT ROOF PENETRATION SIZES TO ROOFTOP UNITS ARE SAME AS DUCT MAIN, UNLESS NOTED OTHERWISE. TRANSITION TO UNIT CONNECTION SIZES WITHIN ROOF CURBS.
7. LOCATIONS OF ORIFICES/VENTS FOR FABRIC DUCTS ARE ORIENTED WHEN FACING THE DIRECTION OF AIRFLOW.
8. MAINTAIN A MINIMUM OF 10'-0" HORIZONTAL DISTANCE FROM ANY INTAKE TO EXHAUST OUTLET.
9. HVAC CONTRACTOR SHALL CLOSELY COORDINATE WITH GENERAL CONTRACTOR FOR EXACT FIRE AND FIRE/SMOKE DAMPER PENETRATION SIZES IN WALLS AND FLOORING. FLOOR OPENINGS PROVIDED BY PRECAST MANUFACTURER ARE OVERSIZED AND M.C. MUST RELAY EXACT (NOT NOMINAL) OPENING SIZE MEETING UL LISTING TO CONCRETE INSTALLER FOR FRAMING OUT FLOOR OPENING. FLOOR OPENING SHALL HAVE 5'S" FREE SPACE AROUND ALL FOUR SIDES OF DAMPER AT ANY TIME TO ALLOW FOR EXPANSION. NO EXCEPTIONS. INSTALL MOUNTING ANGLE ON ALL FOUR SIDES OF FIRE DAMPERS. ANGLES SHALL NOT BE SECURED TO FLOOR OR WALL. FIRE CAULKING AROUND DAMPERS IS STRICTLY PROHIBITED. REFER TO ST ANDARDS UL555 & UL555S AND DAMPER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PLUMBING GENERAL NOTES

1. COORDINATE UNDERGROUND PIPING WITH GENERAL CONTRACTOR TO ENSURE PROPER FOOTING DEPTH CLEARANCE.
2. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS AS SPECIFIED AND AS REQUIRED BY CODE.
3. RUN 4" AND LARGER SANITARY WASTE, STORM DRAIN, AND ALL VENT PIPING AT 1/8" PER FOOT SLOPE UNLESS NOTED OTHERWISE, AND LESS THAN 4" WASTE PIPING AT 1/4" PER FOOT SLOPE. HORIZONTAL VENT PIPING.
4. ELEVATIONS SHOWN ARE TO THE INVERT OF ALL PIPING BASED ON ARCHITECTURAL FINISHED FLOOR ELEVATION (FFE) OF 100'-0", UNLESS NOTED OTHERWISE.
5. ADJUST SEWER INVERTS TO KEEP BOTTOM OF PIPES IN LINE WHERE PIPE SIZES CHANGE.
6. PROVIDE SHUTOFF VALVES IN ALL WATER PIPING SYSTEM BRANCHES IN WHICH BRANCH PIPING SERVES TWO OR MORE FIXTURES (NOT SHOWN FOR CLARITY) AND WHERE SHOWN ON PLAN AND RISERS.
7. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER ACCESSORIES REQUIRING ACCESS ARE ACCESSIBLE.
8. UNIONS AND/OR FLANGES SHALL BE INSTALLED AT EACH PIECE OF EQUIPMENT, IN BYPASSES, AND IN LONG RUNS (OVER 100') TO PERMIT DISASSEMBLY FOR ALTERATION AND REPAIRS.
9. ALL VALVES SHALL BE ACJUSTED FOR SMOOTH AND EASY OPERATION.
10. ALL VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS.
11. PROVIDE CLEANOUTS IN SANITARY AND STORM DRAINAGE SYSTEMS AT THE ENDS OF RUNS, AT CHANGES IN DIRECTION, NEAR THE BASE OF STACKS, EVERY 100' IN 4" AND LARGER HORIZONTAL RUNS. EVERY 50' IN 3" AND SMALLER HORIZONTAL RUNS, WHERE NOTED ON PLANS, AND WHERE REQUIRED BY CODE.
12. ALL VALVES SHALL BE INSTALLED SO THAT THE VALVE REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
13. SEE PLUMBING RISERS FOR SIZING NOT SHOWN ON PLAN SHEETS (FOR CLARITY) AND SEE PLUMBING FIXTURE SCHEDULE FOR FUTURE CONNECTIONS AND RUNOUT SIZES.
14. CONTRACTOR TO ENSURE THAT CLEANOUTS (FCO, WCO, CO) LOCATIONS DO NOT REST BELOW OR BEHIND CASEWORK.
15. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL REMOVING, CUTTING, PATCHING, AND REPLACEMENT OF ALL BUILDING STRUCTURE, SURFACES, AND FINISHES REQUIRED TO COMPLETE WORK STATED IN THE CONTRACT DOCUMENTS.
16. PLUMBING CONTRACTOR TO COORDINATE COUNTER OPENINGS FOR NEW SINKS/LAVS WITH GENERAL CONTRACTOR PRIOR TO ORDERING MATERIALS.
17. PIPES SHOWN SPREAD APART ON PLANS FOR CLARITY. CONTRACTOR TO INSTALL PIPES TIGHT TOGETHER.
18. ALL UNDERGROUND DOMESTIC WATER PIPING SHALL BE SEAMLESS TYPE 'K' COPPER PIPING WITH NO JOINTS. SEE SPECIFICATIONS.
19. GAS PIPING SUPPORTS TO BE EVERY 5 FEET.
20. SEE ARCHITECTURAL ROOF PLAN FOR ROOF SLOPE AND SCUPPER SIZES/LOCATIONS.
21. REDUCED PRESSURE ZONE BACKFLOW PREVENTER (RPZ) SHALL BE INSTALLED AT AN ELEVATION BETWEEN 3'-0" AFF AND 6'-0" AFF AND LABELED INDICATING EQUIPMENT SERVED. RPZ'S SHALL BE INSPECTED AND TESTED ANNUALLY OR AT A RATE PER LOCAL CODES.
22. PIPING MATERIAL FOR SANITARY WASTE, PLUMBING VENTS, AND STORM SEWER SHALL BE CAST IRON WHERE PIPING RUNS THROUGH A RETURN/AIR PLENUM. REFERENCE APPLICABLE MECHANICAL CODE WITH LOCAL AMENDMENTS. WHERE PIPING MATERIAL MUST BE PVC THE PIPE SHALL BE WRAPPED WITH 3M FIRE BARRIER WRAP AS DESCRIBED IN MECHANICAL SPECIFICATION.
23. FIRE CAULK ALL FLOOR PENETRATIONS AND WHERE PIPING PENETRATES RATED WALLS.
24. ALL PLUMBING INSTALLATION SHALL CONFORM TO STATE PLUMBING CODE WITH LOCAL AMENDMENTS.
25. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, ALL GAS PIPING AND EQUIPMENT SHALL BE SUPPORTED PER THE SMACNA GUIDELINES FOR SEISMIC RESTRAINT AND CURRENT APPLICABLE STATE BUILDING CODE.
26. THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND ALL REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING STATE BUILDING CODE, THE STATE MECHANICAL CODE, AND THE STATE PLUMBING CODE.
27. ALL EQUIPMENT AND FIXTURES INSTALLED UNDER THIS CONTRACT SHALL BE HUNG OR ANCHORED IN ACCORDANCE WITH TITLE 24, TABLE NO. 16 A-O (APPLICABLE TO PROJECTS IN CALIFORNIA ONLY).
28. PLUMBING CONTRACTOR IS RESPONSIBLE TO REMOVE ALL SHAVINGS IN PVC/CPVC/ABS PIPING IN DOMESTIC WATER, SANITARY SEWER, AND STORM SEWER PIPING PRIOR TO LEAVING SITE.
29. PLUMBING CONTRACTOR IS RESPONSIBLE TO PURGE DOMESTIC WATER SYSTEM, INCLUDING BUT NOT LIMITING, ALL CHAMP/CHW PIPING, WATER HEATERS, VALVING, AND PLUMBING FIXTURES, OF ALL DELETERIOUS MATTER AND DISINFECT ENTIRE SYSTEM PRIOR TO UTILIZATION, AS DEFINED AND DESCRIBED IN APPLICABLE PLUMBING CODE.

MECHANICAL ABBREVIATIONS

AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASURING STATION
AHU	AIR HANDLING UNIT
ARI/SHR	ALTERNATE
ALT	ALTERNATE
AP	ACCESS PANEL(S)
APD	AIR PRESSURE DROP
ARCH	ARCHITECT(URAL)
AS	AIR SEPARATOR
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BR	BOILER
BOD	BOTTOM OF DUCT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACK WATER VALVE
CA	COMBUSTION AIR
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CHW	CHILLED WATER
CLG	CEILING
CLR	CORE LOOP WATER RETURN
CLS	CORE LOOP WATER SUPPLY
CO	CLEAN OUT
COND	CONDENSATE(D) (ER)
CONN	CONNECTION
CONT	CONTINUE(OUS) (ED) (ATION)
CONTR	CONTRACTOR
CP	CIRCULATING PUMP
CR	CONDENSER RETURN
CRU	COMPUTER ROOM UNIT
CS	CONDENSER SUPPLY
CTE	CONNECT TO EXISTING
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CW	COLD WATER
CWR	CHILLER WATER RETURN
CWS	CHILLED WATER SUPPLY
DEG	DEGREE(S)
DH	DUCT HEATER
DIFF	DIFFUSER
DN	DOWN
DT	DRAIN TILE
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EHC	ELECTRIC HEATING COIL
EL	ELEVATION
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
F	FAHRENHEIT
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEAN OUT
FDU	FAN COIL UNIT
FD	FLOOR DRAIN
FD	FIRE DAMPER
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
FFD	FUNNEL FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLR	FLOOR
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FOOT, FEET
FTR	FINNED TUBE RADIATION
G	GAS
GA	GAUGE
GAL	GALLON
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPH	GALLON(S) PER HOUR
GPM	GALLON(S) PER MINUTE
GR	GRILLE
GW	GREASE WASTE (SANITARY)
H	HARD WATER
H.STAT	HUMIDISTAT
HB	HOSE BIBB
HOA	HAND-OFF-AUTO SWITCH
HP	HORSEPOWER
HP	HEAT PUMP
HTG	HEATING
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INDIRECT DRAIN
IE	INVERT ELEVATION
IN	INCH(ES)
INSUL	INSULATION
INV	INVERT
INV EL	INVERT ELEVATION
IRR	IRRIGATION WATER

MECHANICAL ABBREVIATIONS

L	LIQUID
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LB/HR	POUNDS PER HOUR
LF	LINEAL FOOT, FEET
LTA	LINED TRANSFER AIR
LV	LOUVER
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MB	MOP BASIN
MBH	1,000 BTUH
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
#	NUMBER
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OHD	OVERFLOW ROOF DRAIN
OSD	OVERFLOW STORM DRAIN
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PG	PRESSURE GAUGE
PLBG	PLUMBING
PRV	POWER ROOF VENTILATOR
PRV	PRESSURE REDUCING VALVE
PRV	PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE AND TEMPERATURE FITTING
RA	RETURN AIR
ROP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REG	REGISTER
REQ	REQUIRED
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RL	REFRIGERANT LIQUID
RM	ROOM
RO	REVERSE OSMOSIS
RP	RADIANT PANEL
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE BACKFLOW PREVENTER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RWL	RAIN WATER LEADER
S	SUCTION
SA	SUPPLY AIR
SAN	SANITARY
SCCR	SHORT CIRCUIT CURRENT RATING
SCU	SELF CONTAINED UNIT
SGW	SOFTENED COLD WATER
SD	STORM DRAIN
SE	SEWAGE EJECTOR
SF	SUPPLY FAN, SQUARE FEET
SH	SHOWER
SP	STATIC PRESSURE, SUMP PUMP
SR	SUCTION RISER
SS	STAINLESS STEEL
ST	STORM
STM	STEAM
STP	STANDPIPE
SU	SUPPLY UNIT
T	THERMOSTAT, TEMPERED
T-STAT	THERMOSTAT
TA	TRANSFER AIR
TC	TEMPERATURE CONTROL(S)
TCC	TEMPERATURE CONTROL(S) CONTRACTOR
TD	TEMPERATURE DIFFERENTIAL
TMV	THERMOSTATIC MIXING VALVE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
V	VENT
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VSD	VARIABLE SPEED DRIVE (MOTOR CONTROLLER)
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WATER HEATER
WH	WALL HYDRANT
WP	WATERPROOF
WPD	WATER PRESSURE DROP
WS	WATER SOFTENER

MECHANICAL SYMBOL LEGEND

PLUMBING

- DOMESTIC COLD WATER (SOFT)
- DOMESTIC COLD WATER (HARD)
- DOMESTIC COLD WATER (FLUSHING FIXTURES)
- DOMESTIC COLD WATER (NONPOTABLE)
- TEMPERED DOMESTIC HOT WATER
- DOMESTIC HOT WATER
- RECIRCULATION HOT WATER
- DOMESTIC HOT WATER (140° F)
- RECIRCULATION DOMESTIC HOT WATER (140° F)
- SANITARY WASTE / PUMPED (PW)
- GREASE WASTE
- FLAMMABLE WASTE
- VENT
- SANITARY WASTE (ACID)
- VENT (ACID)
- STORM DRAIN (PRIMARY) / PUMPED (PSD)
- OVERFLOW STORM DRAIN (OVERFLOW)
- DRAIN TILE
- POOL DRAINAGE
- NATURAL GAS
- CONDENSATE DRAIN PIPING
- COMPRESSED AIR
- PLUMBING RISER TAG

MISC. PIPING

- AQUASTAT
- FLOW SWITCH
- PRESSURE/GAUGE WITH ISOLATION VALVE
- ELBOW UP
- TEE UP
- CLEANOUT - FLOOR (FCO)
- PIPE CAP
- ECCENTRIC REDUCER
- CONCENTRIC REDUCER
- FLEXIBLE CONNECTION
- CHECK VALVE
- GATE VALVE
- GAS COCK VALVE
- STOP & WASTE VALVE
- BALL VALVE
- BUTTERFLY/SHUT-OFF VALVE
- GLOBE VALVE
- CONTROL VALVE (3-WAY)
- GLOBE ANGLED VALVE
- BACKFLOW PREVENTER
- BACKWATER VALVE
- GAS PRESSURE REGULATOR
- FLOW DIRECTION
- PIPE PITCH DIRECTION
- PIPE UNION
- THERMOMETER
- TRIPLY DUTY VALVE
- PRESSURE SWITCH
- TEMPERATURE GAUGE
- WATER HAMMER ARRESTOR
- IN-LINE PUMP
- ELBOW DOWN
- TEE-OFF BOTTOM / DOWN
- CO CLEANOUT - CEILING (CO)
- EXPANSION JOINT (LOOP)
- PIPE ANCHOR
- ALIGNMENT GUIDES
- CIRCUIT BALANCING VALVE
- STRAINER
- STRAINER WITH BLOW DOWN
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE
- FLOW MEASURING STATION
- FLOW LIMITING VALVE
- SOLENOID VALVE
- CONTROL VALVE (3-WAY)
- DRAIN VALVE
- AIR VENT - AUTOMATIC
- AIR VENT - MANUAL
- FLOW SWITCH
- HOPPER DRAIN / FLOOR SINK
- FLOOR DRAIN
- HYDRANT (WALL, ROOF, YARD)
- HOSE BIBB
- DSN DOWNSPOUT NOZZLE

HVAC

- SUPPLY AIR DUCT
- OUTSIDE AIR DUCT
- COMBUSTION AIR DUCT
- THERMOSTAT
- SPACE TEMPERATURE SENSOR
- HUMIDISTAT
- COMB. TEMP. & HUM. SENSOR
- CARBON MONOXIDE SENSOR
- NITROGEN DIOXIDE SENSOR
- VOLATILE ORGANIC COMPOUND SENSOR
- CARBON MONOXIDE AND NITROGEN DIOXIDE SENSOR
- WALL SWITCH
- MOTORIZED DAMPER
- LOW-LEAK MOTORIZED DAMPER
- BACKDRAFT DAMPER
- VOLUME DAMPER (MANUAL)
- VD (REMOTELY OPERATED)
- VD (IRIS CLOSURE)
- CEILING SUPPLY DIFFUSER
- SUPPLY AIR REGISTER
- RETURN AIR GRILLE / REGISTER
- EXHAUST AIR GRILLE / REGISTER
- RETURN AIR GRILLE / REGISTER W/ ROUND BOOT
- SIDEWALL SUPPLY REGISTER
- SIDEWALL RETURN / EXHAUST GRILLE
- ACCESS PANEL
- SUPPLY DUCT ELBOW WITH TURNING VANES
- STANDARD OR LINED DUCT (SUPPLY, RETURN, EXHAUST). DUCT IS LABELLED TO INDICATE INTERNAL DUCT DIMENSION. SEE SPECIFICATION FOR INSULATION.
- DOUBLE WALL (SUPPLY, RETURN, EXHAUST). DUCT IS LABELLED TO INDICATE INTERNAL DUCT DIMENSION.
- STANDARD ROUND TAKEOFF (CONICAL BELL MOUTH) WITH VOLUME DAMPER.
- DUCT UP (SUPPLY)
- DUCT DOWN (SUPPLY)
- DUCT UP (RETURN/EXHAUST)
- DUCT DOWN (RETURN/EXHAUST)

DIFFUSER, REGISTER, GRILLE TAG

A 24x6 / 8

GENERAL NOTES:

A. REFER TO SHEET M0.0 FOR ADDITIONAL GENERAL NOTES.

A. COORDINATE WITH STRUCTURAL WHEN DRILLING THROUGH STRUCTURAL MEMBERS.

B. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

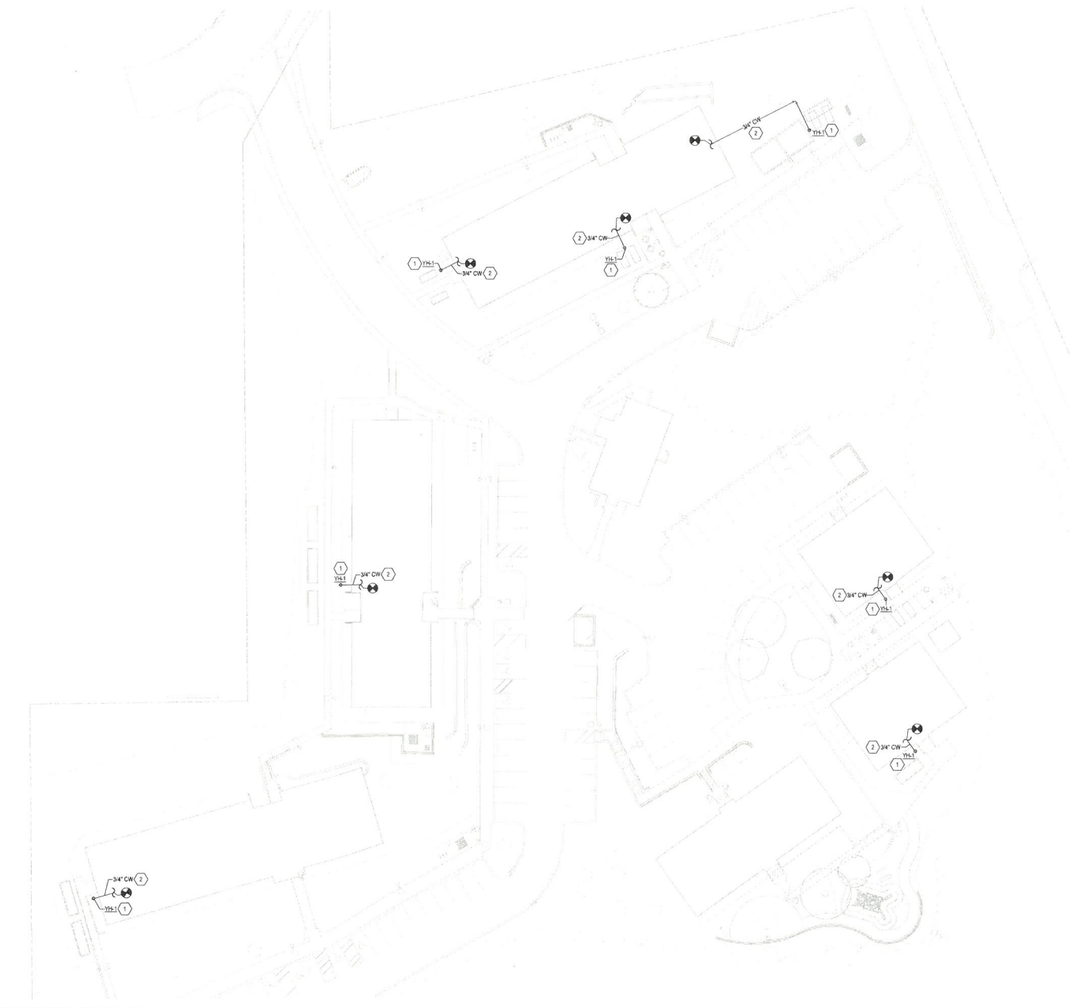
C. ALL EQUIPMENT AND COMPONENTS SHALL BE INSTALLED IN LOCATIONS THAT ARE READILY ACCESSIBLE FOR ROUTINE MAINTENANCE.

D. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING INVERT ELEVATIONS, LOCATIONS, AND SIZES PRIOR TO INSTALLING ANY PIPING.

E. DO NOT RUN ANY PIPING THROUGH, OVER, OR UNDER ELECTRICAL EQUIPMENT. PROVIDE CLEARANCE IN ACCORDANCE WITH THE NEC.

KEY NOTES: ⬡

1. PROVIDE YARD HYDRANT AT ALL GARDEN PLANTER LOCATIONS. LOCATE SHUTOFF IN ADJACENT BUILDING. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
2. COLD WATER SUPPLY LINES SHALL BE AT LEAST 3'-6" DEEP FOR FROST DEPTH.



1 MECHANICAL SITE PLAN
SCALE: 1/32" = 1'-0"

6/13/2024 4:18:42 AM

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street Suite 300 San Francisco CA 94107 T 415.781.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

MECHANICAL SITE PLAN

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M1.10

SEE SHEET MD.10 FOR EXISTING UNIT DEMOLITION PLANS



2 BLDG. A 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET MD.10 FOR EXISTING UNIT DEMOLITION PLANS



1 BLDG. A 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

6/13/2024 4:19:10 AM

GENERAL NOTES:

A. REFER TO SHEET MD.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. DEMO EXISTING HYDRONIC BOILERS. ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. SEE KEYNOTE 2 FOR BLDG C.
2. DEMO ONLY ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. EXISTING BOILER(S) AND PIPING TO REMAIN.
3. DEMO EXISTING PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
22 Battery Street Suite 888 San Francisco, CA 94107 | 415.981.5252

☐ CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

☐ LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

☐ MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

☐ STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING A MECHANICAL DEMOLITION PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

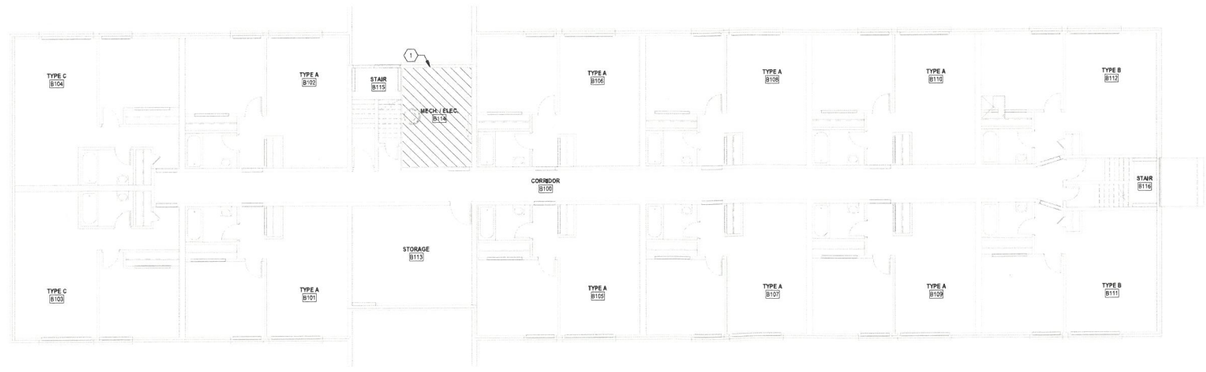
MD2.11

SEE SHEET MS.10 FOR EXISTING UNIT DEMOLITION PLANS



2 BLDG. B 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET MS.10 FOR EXISTING UNIT DEMOLITION PLANS



1 BLDG. B 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

6/13/2024 4:19:11 AM

GENERAL NOTES:

A. REFER TO SHEET M0.03 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. DEMO EXISTING HYDRONIC BOILERS, ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. SEE KEYNOTE 2 FOR BLDG. C.
2. DEMO ONLY ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. EXISTING BOILER(S) AND PIPING TO REMAIN.
3. DEMO EXISTING PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | BOSTON | MINNEAPOLIS
220 Bryant Street Suite 310, San Francisco, CA 94107 T 415.981.5252

☐ CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

☐ LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

☐ MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

☐ STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING B MECHANICAL DEMOLITION PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

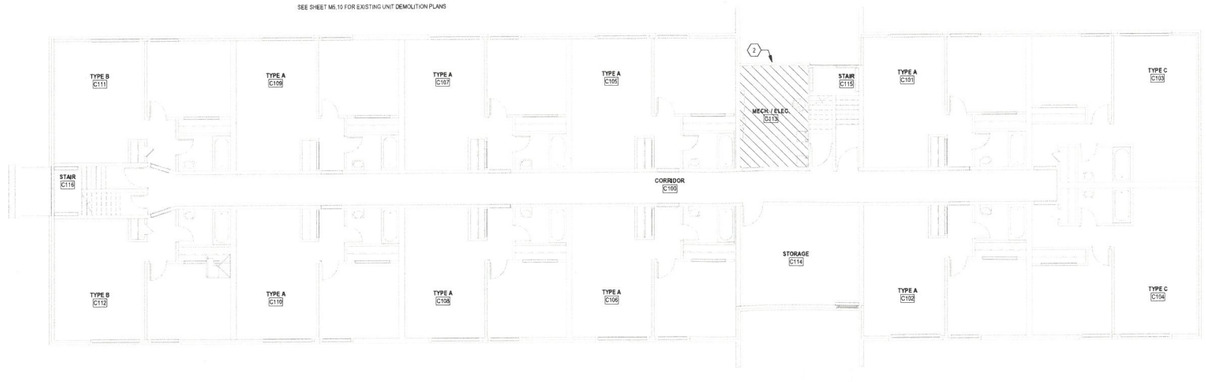
MD2.12

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



2 BLDG. C 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



1 BLDG. C 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. DEMO EXISTING HYDRONIC BOILERS. ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. SEE KEYNOTE 2 FOR BLDG. C.
2. DEMO ONLY ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. EXISTING BOILER(S) AND PIPING TO REMAIN.
3. DEMO EXISTING PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING. FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant 22nd st. Suite 300 San Francisco, CA 94107 T 415.995.5264

☐ CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

☐ LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

☐ MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

☐ STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING C MECHANICAL DEMOLITION PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

MD2.13

6/13/2024 4:19:12 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. DEMO EXISTING HYDRONIC BOILERS. ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. SEE KEYNOTE 2 FOR BLDG. C.
2. DEMO ONLY ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. EXISTING BOILERS AND PIPING TO REMAIN.
3. DEMO EXISTING PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING. FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN | SUSTAINABILITY | SERVICE | SUNNIDAYS

222 Bryant Street Suite 300, San Francisco, CA 94107 T 415.974.5300

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

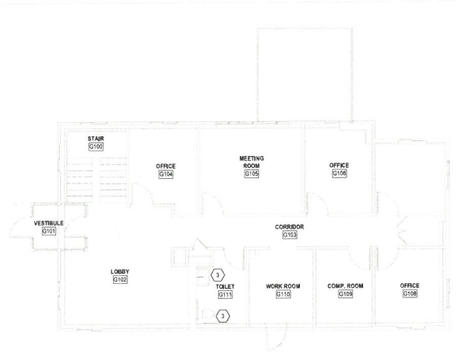
MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS

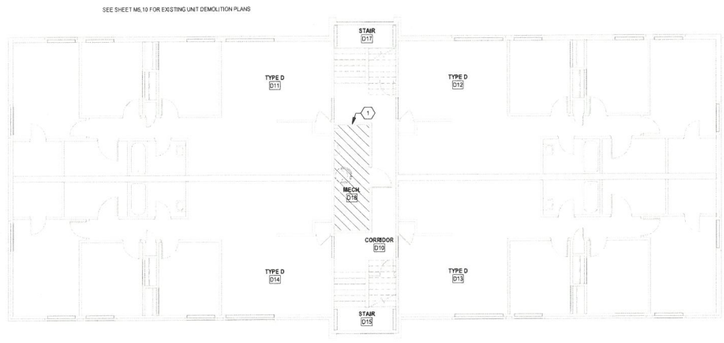


4 BLDG. D 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

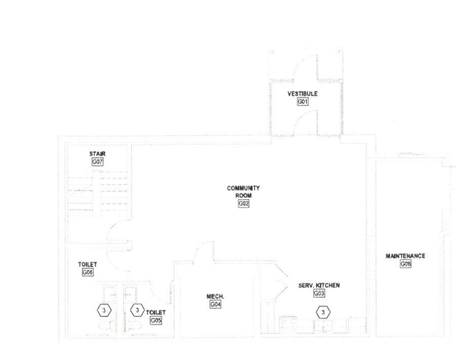


2 BLDG. G 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



3 BLDG. D 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"



1 BLDG. G 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

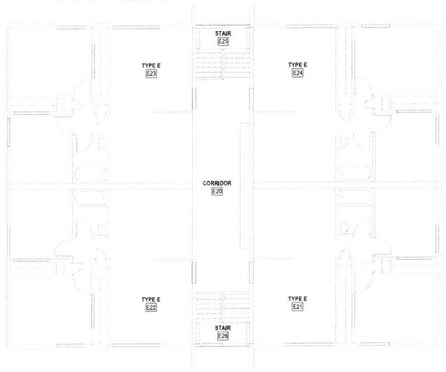
BUILDING D & G MECHANICAL DEMOLITION PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

MD2.14

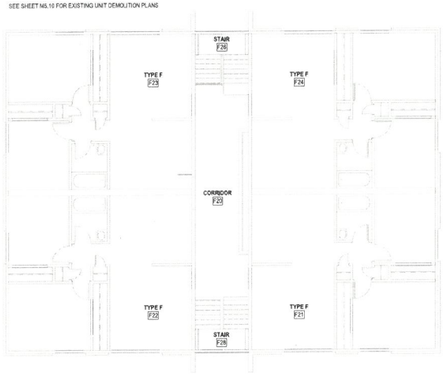
6/13/2024 4:19:13 AM

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



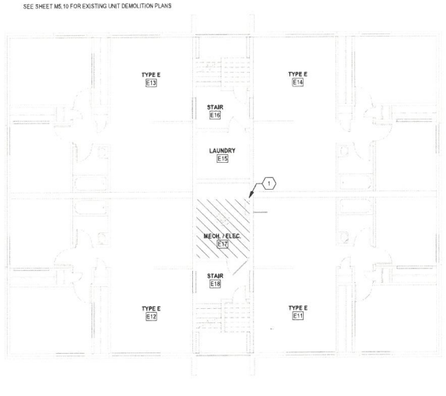
4 BLDG. E 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



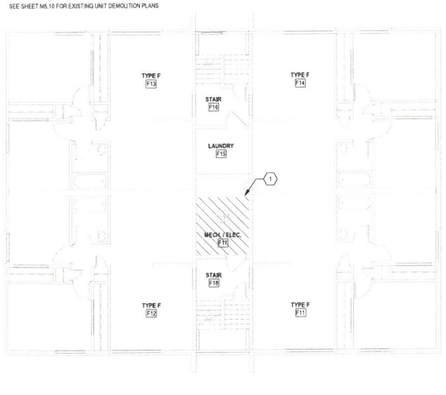
2 BLDG. F 2ND FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



3 BLDG. E 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

SEE SHEET M5.10 FOR EXISTING UNIT DEMOLITION PLANS



1 BLDG. F 1ST FLOOR MECHANICAL DEMO PLANS
SCALE: 1/8" = 1'-0"

6/13/2024 4:19:16 AM

GENERAL NOTES:

A. REFER TO SHEET M0.05 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. DEMO EXISTING HYDRONIC BOILERS. ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. SEE KEYNOTE 2 FOR BLDG. C.
2. DEMO ONLY ASSOCIATED FLUE BREACHING AND COMBUSTION AIR VENTING. EXISTING BOILER(S) AND PIPING TO REMAIN.
3. DEMO EXISTING PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING. FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
275 Bryant Street, Suite 360, San Francisco, CA 94107 T 415.781.5326

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

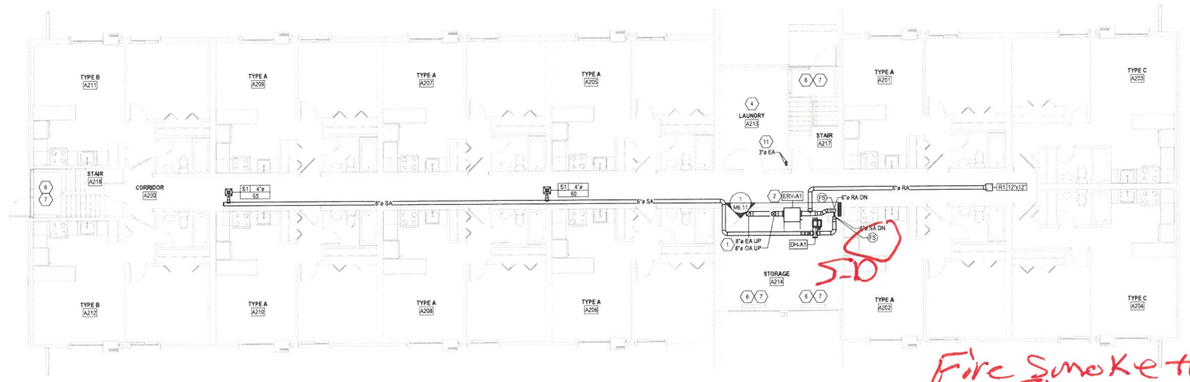
CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

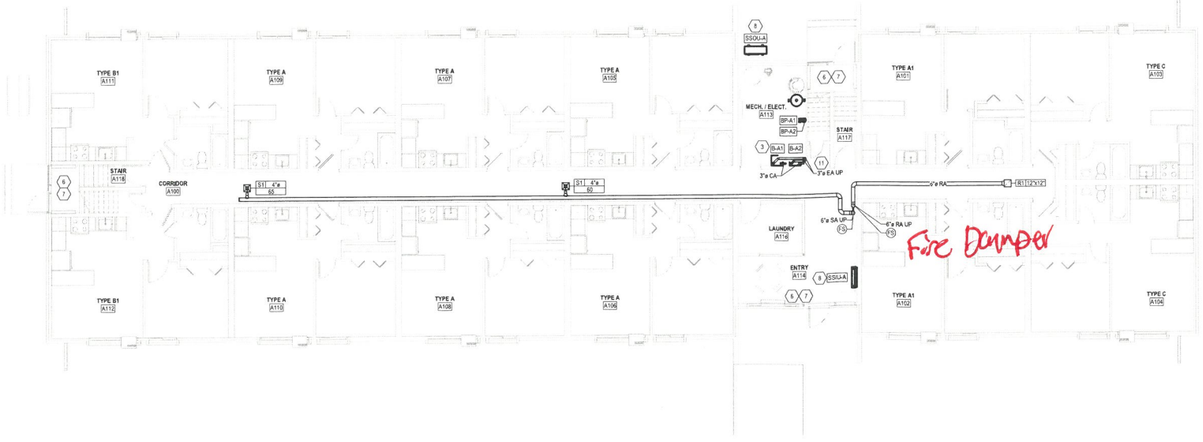
BUILDING E & F MECHANICAL DEMOLITION PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

MD2.15



2 BLDG. A 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. A 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. PROVIDE AIR SEALING, COMPARTMENTALIZATION, & BLOWER DOOR TESTING (ALL BUILDINGS, INCLUDING ATTIC SPACES).

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. OUTDOOR AIR AND EXHAUST DUCTS UP THRU ROOF. TERMINATE WITH GOOSENECK.
2. ERV TO BE HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS.
3. EXISTING BOILERS TO BE REPLACED IN PLACE WITH NEW CPVC VENTING.
4. EXISTING LAUNDRY EXHAUST DUCT TO REMAIN.
5. EXISTING BOILERS TO REMAIN. REPLACE VENTING WITH CPVC VENTING FOR ENTIRE LENGTH OF BOILER FLUE.
6. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
7. HVAC ALTERNATE #1: REPLACE HYDRONIC BASEBOARD AT CORRIDORS, STAIRS, AND LOBBY.
8. HVAC ALTERNATE #3: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING A.
9. HVAC ALTERNATE #4: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING B.
10. HVAC ALTERNATE #5: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING C.
11. EXHAUST FLUES UP THRU ROOF. USE EXISTING CEILING PENETRATIONS.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | 124 FRANKLIN STREET | BOSTON, MA
222 Bryant Street, Suite 300, San Francisco, CA 94107 T 415.915.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

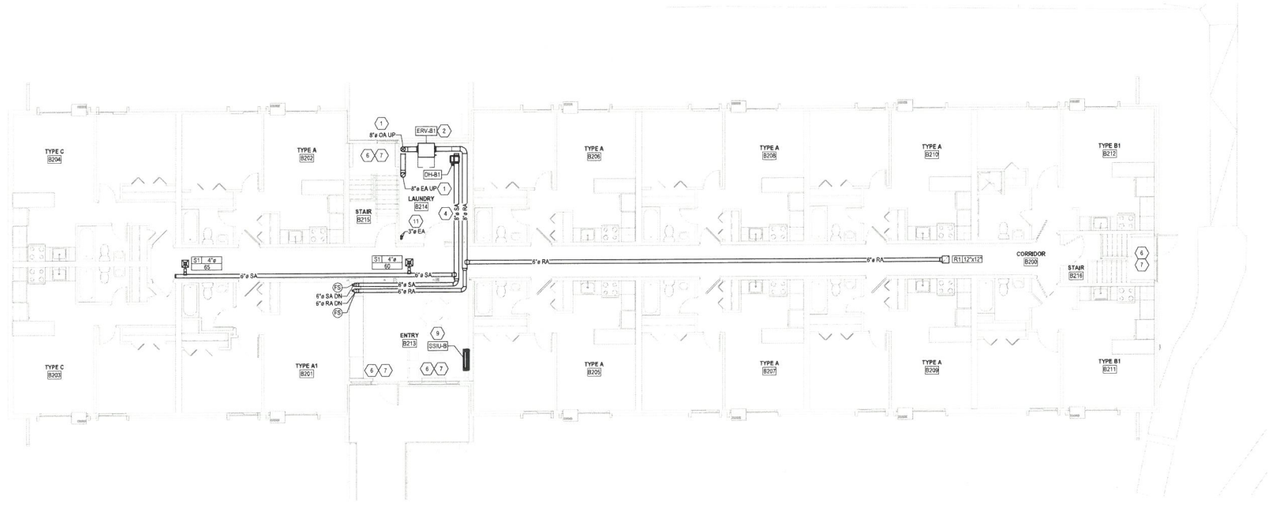
1080 Montreal Avenue
St. Paul, MN 55116

BUILDING A HVAC FLOOR PLANS

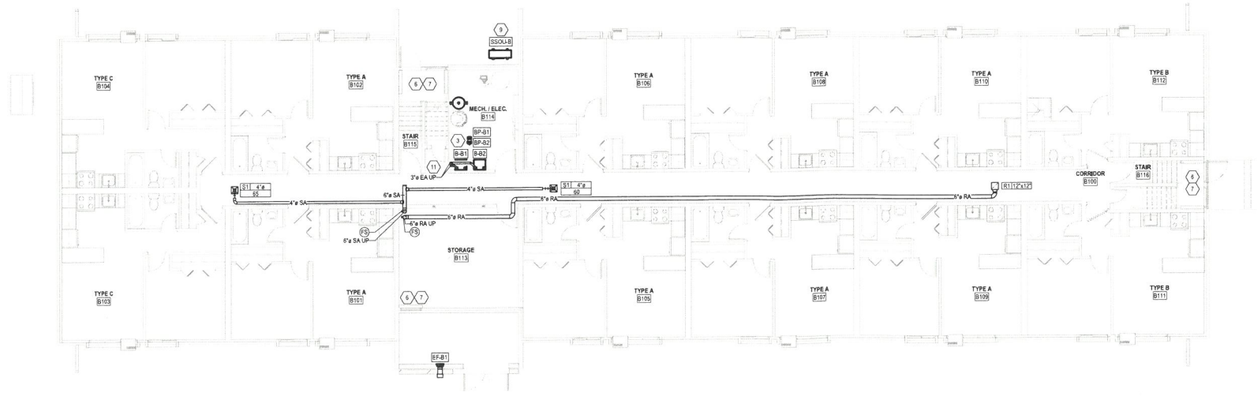
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M2.11

6/13/2024 4:18:44 AM



2 BLDG. B 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. B 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"

6/13/2024 4:18:45 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER, OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. PROVIDE AIR SEALING, COMPARTMENTALIZATION, & BLOWER DOOR TESTING (ALL BUILDINGS, INCLUDING ATTIC SPACES).

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. OUTDOOR AIR AND EXHAUST DUCTS UP THRU ROOF. TERMINATE WITH GOOSENECK.
2. ERV TO BE HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS.
3. EXISTING BOILERS TO BE REPLACED IN PLACE WITH NEW CPVC VENTING.
4. EXISTING LAUNDRY EXHAUST DUCT TO REMAIN.
5. EXISTING BOILERS TO REMAIN. REPLACE VENTING WITH CPVC VENTING FOR ENTIRE LENGTH OF BOILER FLUE.
6. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
7. HVAC ALTERNATE #1: REPLACE HYDRONIC BASEBOARD AT CORRIDORS, STAIRS, AND LOBBY.
8. HVAC ALTERNATE #3: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING A.
9. HVAC ALTERNATE #4: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING B.
10. HVAC ALTERNATE #5: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING C.
11. EXHAUST FLUES UP THRU ROOF. USE EXISTING CEILING PENETRATIONS.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Sutter Street, Suite 300, San Francisco, CA 94108 T 415.391.5332

☐ CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

☐ LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

☐ MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

☐ STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING B HVAC FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M2.12

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

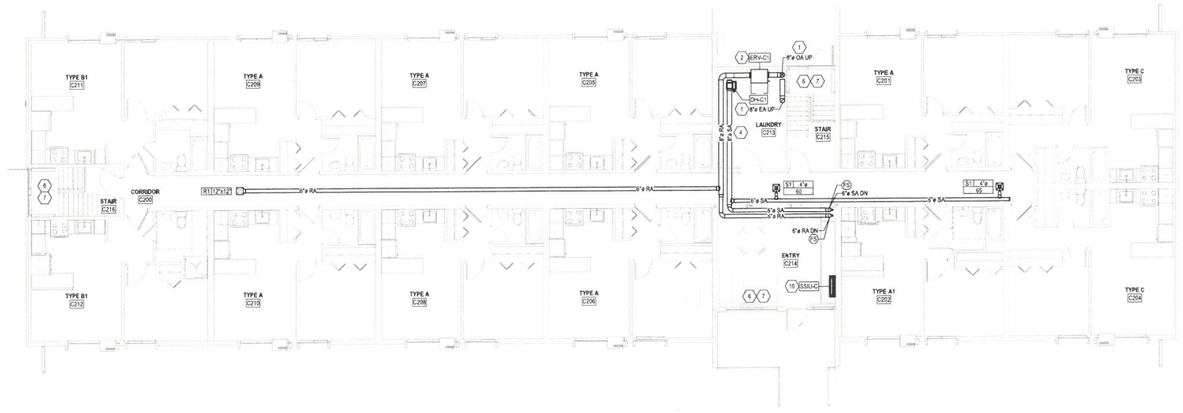
I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. PROVIDE AIR SEALING, COMPARTMENTALIZATION, & BLOWER DOOR TESTING (ALL BUILDINGS, INCLUDING ATTIC SPACES).

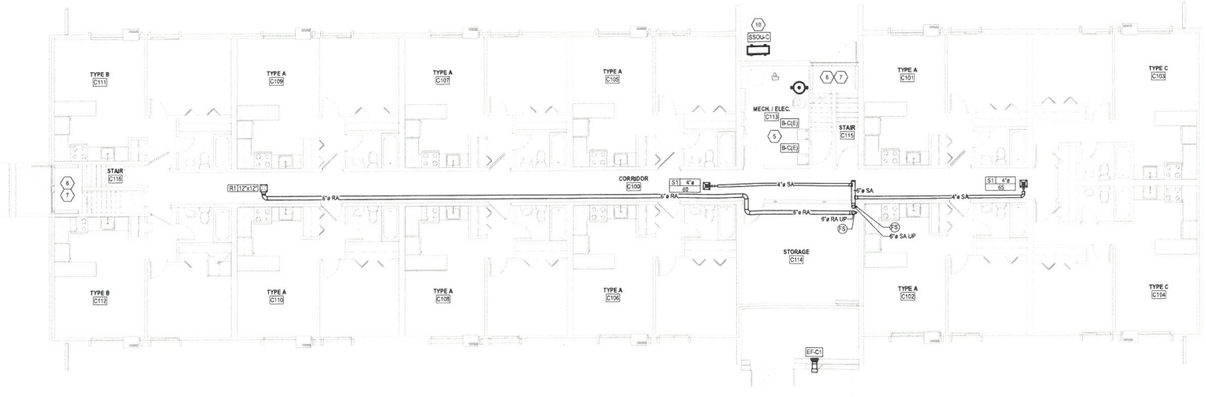
KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. OUTDOOR AIR AND EXHAUST DUCTS UP THRU ROOF. TERMINATE WITH GOOSENECK.
2. ERV TO BE HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS.
3. EXISTING BOILERS TO BE REPLACED IN PLACE WITH NEW CPVC VENTING.
4. EXISTING LAUNDRY EXHAUST DUCT TO REMAIN.
5. EXISTING BOILERS TO REMAIN. REPLACE VENTING WITH CPVC VENTING FOR ENTIRE LENGTH OF BOILER FLUE.
6. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
7. HVAC ALTERNATE #1: REPLACE HYDRONIC BASEBOARD AT CORRIDORS, STAIRS, AND LOBBY.
8. HVAC ALTERNATE #3: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING A.
9. HVAC ALTERNATE #4: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING B.
10. HVAC ALTERNATE #5: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING C.
11. EXHAUST FLUES UP THRU ROOF. USE EXISTING CEILING PENETRATIONS.



2 BLDG. C 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. C 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"

6/13/2024 4:18:47 AM

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street, Suite 300 San Francisco, CA 94107 T 415.981.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

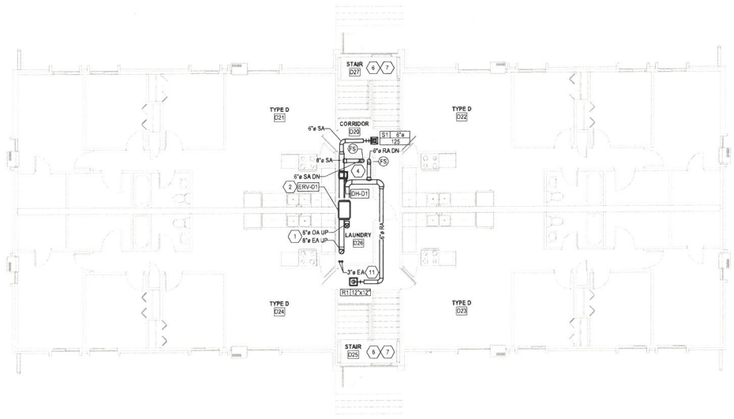
CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

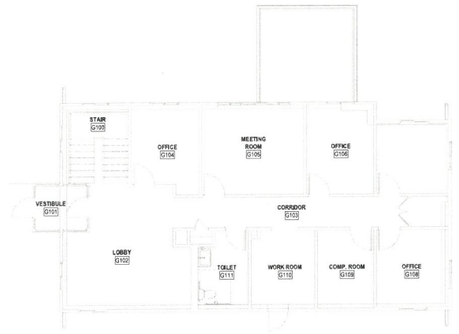
BUILDING C HVAC FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

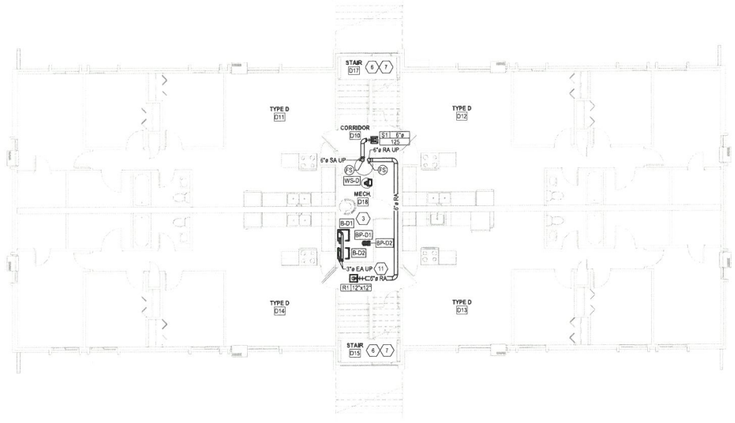
M2.13



4 BLDG. D 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



2 BLDG. G 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



3 BLDG. D 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. G 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. PROVIDE AIR SEALING, COMPARTMENTALIZATION, & BLOWER DOOR TESTING (ALL BUILDINGS, INCLUDING ATTIC SPACES).

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. OUTDOOR AIR AND EXHAUST DUCTS UP THRU ROOF. TERMINATE WITH GOOSENECK.
2. ERV TO BE HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS.
3. EXISTING BOILERS TO BE REPLACED IN PLACE WITH NEW CPVC VENTING.
4. EXISTING LAUNDRY EXHAUST DUCT TO REMAIN.
5. EXISTING BOILERS TO REMAIN. REPLACE VENTING WITH CPVC VENTING FOR ENTIRE LENGTH OF BOILER FLUE.
6. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
7. HVAC ALTERNATE #1: REPLACE HYDRONIC BASEBOARD AT CORRIDORS, STAIRS, AND LOBBY.
8. HVAC ALTERNATE #3: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING A.
9. HVAC ALTERNATE #4: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING B.
10. HVAC ALTERNATE #5: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING C.
11. EXHAUST FLUES UP THRU ROOF. USE EXISTING CEILING PENETRATIONS.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street, Suite 300 San Francisco, CA 94107 T 415.981.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

321 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING D & G HVAC FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M2.14

6/13/2024 4:18:48 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

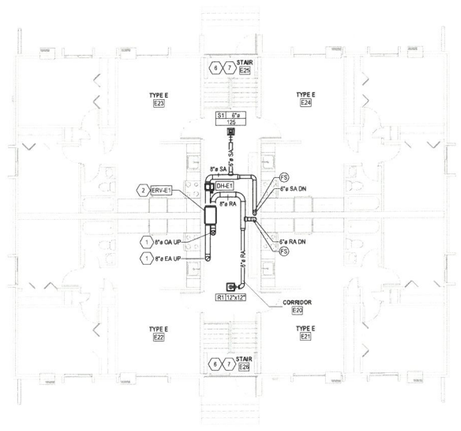
I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. PROVIDE AIR SEALING, COMPARTMENTALIZATION, & BLOWER DOOR TESTING (ALL BUILDINGS, INCLUDING ATTIC SPACES).

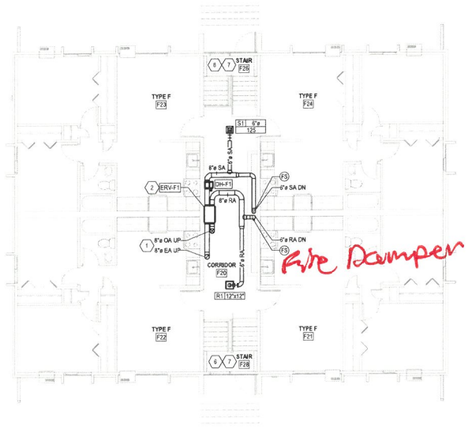
KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

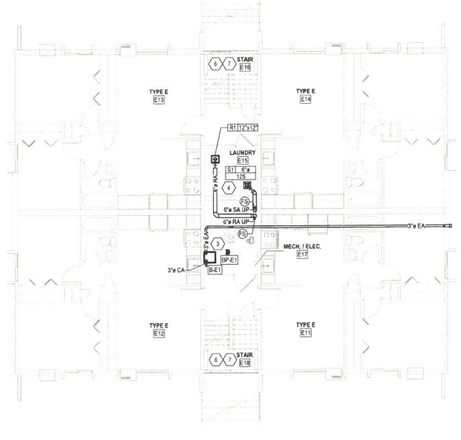
1. OUTDOOR AIR AND EXHAUST DUCTS UP THRU ROOF, TERMINATE WITH GOOSENECK.
2. ERV TO BE HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS.
3. EXISTING BOILERS TO BE REPLACED IN PLACE WITH NEW CPVC VENTING.
4. EXISTING LAUNDRY EXHAUST DUCT TO REMAIN.
5. EXISTING BOILERS TO REMAIN. REPLACE VENTING WITH CPVC VENTING FOR ENTIRE LENGTH OF BOILER FLUE.
6. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
7. HVAC ALTERNATE #1: REPLACE HYDRONIC BASEBOARD AT CORRIDORS, STAIRS, AND LOBBY.
8. HVAC ALTERNATE #3: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING A.
9. HVAC ALTERNATE #4: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING B.
10. HVAC ALTERNATE #5: PROVIDE MINI-SPLIT SYSTEM TO SERVE ENTRANCE LOBBY AT BUILDING C.
11. EXHAUST FLUES UP THRU ROOF. USE EXISTING CEILING PENETRATIONS.



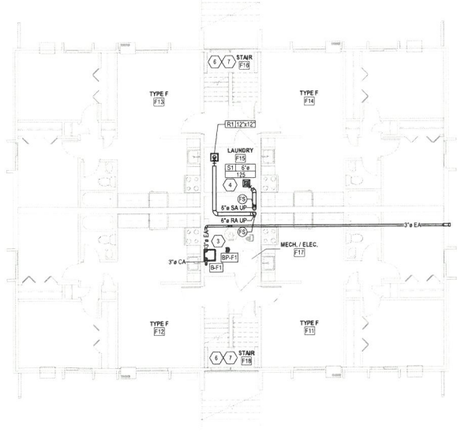
4 BLDG. E 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



2 BLDG. F 2ND FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



3 BLDG. E 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. F 1ST FLOOR HVAC PLAN
SCALE: 1/8" = 1'-0"

Fire Damper fusible Link

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN ■ 724 FRANKLIN | BOISE | SUN VALLEY
222 Bryant Street Suite 300 San Francisco, CA 94107 | T 415.397.1750

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING E & F HVAC FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M2.15

6/13/2024 4:18:51 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

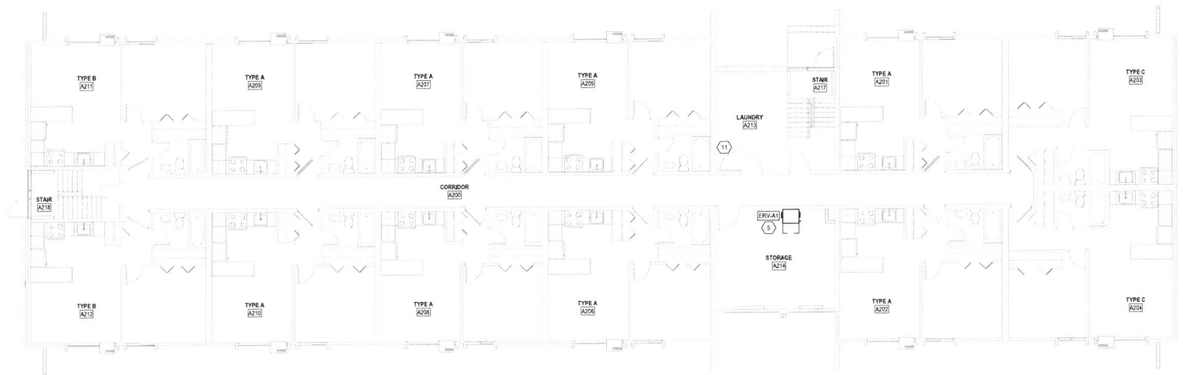
J. ROTO-ROOTER TO CLEAN ALL PLUMBING LINES (ALL BUILDINGS).

K. PLUMBING ALTERNATE: REPLACE ALL WATER SUPPLY LINES THROUGHOUT THE ENTIRE BUILDING FOR ALL BUILDINGS. REUSE EXISTING ROUTING WHERE REASONABLE.

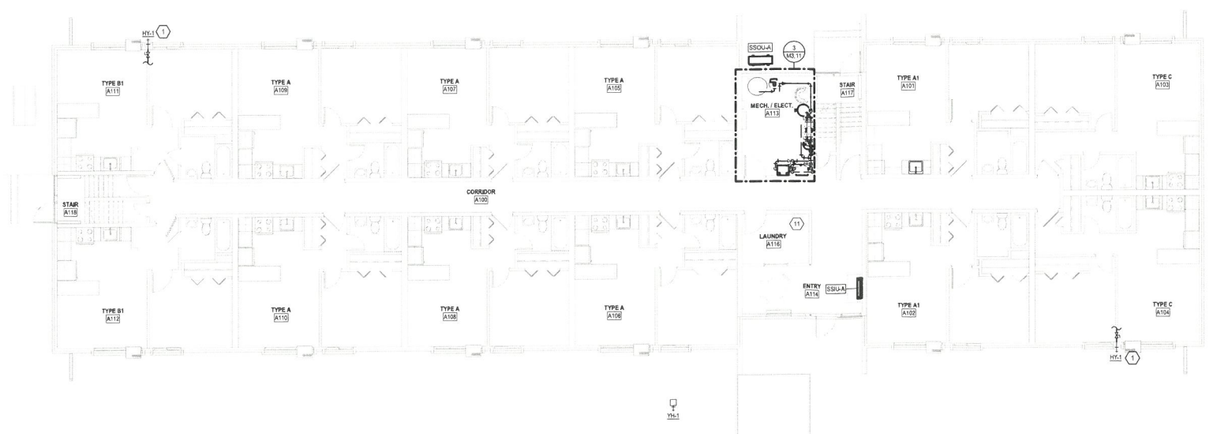
KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

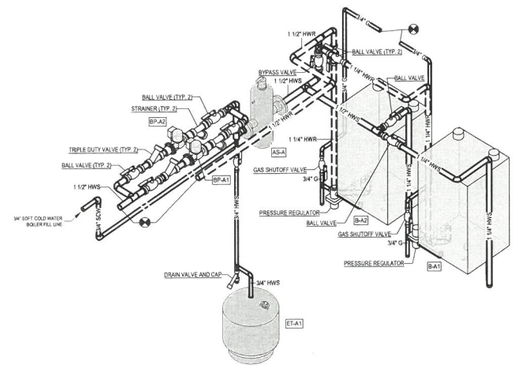
1. EXISTING EXTERIOR HOSE BIBBS SHALL BE REPLACED WITH LOCKABLE CAST BRASS ANTI-SIPHON FROST-FREE SILLCOCK. INSTALL INDOOR SHUTOFF WITH BLEEDER VALVE AT EACH SILLCOCK.
2. REPLACE PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.
3. EXISTING 4" SANITARY SEWER TO BE REPAIRED USING CURED-IN-PLACE PIPE (CIP) REHABILITATION OR OTHER SIMILAR METHOD. SEE CIVIL DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &OR EXTENT OF REHABILITATION.
4. EXISTING 4" SANITARY SEWER TO BE COMPLETELY REPLACED. SEE CIVIL DRAWINGS OR EXISTING DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &OR EXTENT OF REPLACED LINE.
5. CONDENSATE FROM ERV UNIT SHALL BE PIPED AND DISCHARGED INTO NEAREST FLOOR DRAIN OR MOP SINK. PROVIDE FREEZE PROTECTION ON CONDENSATE PIPE WITH RAYCHEM/NVENT HEAT TRACE CABLING & FASTENER FROM THE ERV UNIT TO 2 FT FROM DISCHARGE POINT AS REQUIRED. COORDINATE EXACT FREEZE PROTECTION METHOD WITH ARCHITECT.
6. SIMPLEX WATER SOFTENER. WATER HARDNESS 16 GRAINS PER GALLON. ONLY SOFTEN WATER SERVING HOT WATER HEATER AND HYDRONIC BOILERS.
7. EXISTING WATER HEATER OR INDIRECT WATER HEATER TO REMAIN.
8. 3 SETS OF 4" VENT PIPE ON SOUTH ELEVATION ARE NOTCHED AROUND FLASHING AND CRACKING. REPLACE PIPE WITH CPVC AND PROVIDE INSECT SCREENS.
9. PLUMBING ALTERNATE: PROVIDE 40 GALLON STORAGE TANK TO SERVICE DOMESTIC HOT WATER SYSTEM IN BUILDINGS A & B.
10. PLUMBING ALTERNATE: PROVIDE THERMOSTATIC MIXING VALVE WITH STORAGE TANK TO SERVE INDIRECT WATER HEATER IN BUILDING C.
11. EXISTING UTILITY SINK IN LAUNDRY AT BUILDINGS A, B, C, & D TO REMAIN.



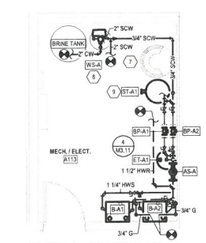
2 BLDG. A 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. A 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



4 BLDG. A - MECH. / ELECT. 3D PIPING DIAGRAM
NO SCALE



3 BLDG. A - MECH/ELEC.
SCALE: 1/4" = 1'-0"

VAN METER WILLIAMS POLLACK LLP

ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street, Suite 300 San Francisco, CA 94107 T 415.391.5282

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58736 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

BUILDING A PIPING FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M3.11

6/13/2024 4:18:54 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. ROTO-ROOTER TO CLEAN ALL PLUMBING LINES (ALL BUILDINGS).

K. PLUMBING ALTERNATE: REPLACE ALL WATER SUPPLY LINES THROUGHOUT THE ENTIRE BUILDING FOR ALL BUILDINGS. REUSE EXISTING ROUTING WHERE REASONABLE.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. EXISTING EXTERIOR HOSE BIBBS SHALL BE REPLACED WITH LOCKABLE CAST BRASS ANTI-SIPHON FROST-FREE SILLCOCK, INSTALL INDOOR SHUTOFF WITH BLEEDER VALVE AT EACH SILLCOCK.

2. REPLACE PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

3. EXISTING 4" SANITARY SEWER TO BE REPAIRED USING CURED-IN-PLACE PIPE (CIP) REHABILITATION OR OTHER SIMILAR METHOD. SEE CIVIL DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REHABILITATION.

4. EXISTING 4" SANITARY SEWER TO BE COMPLETELY REPLACED. SEE CIVIL DRAWINGS OR EXISTING DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REPLACED LINE.

5. CONDENSATE FROM ERV UNIT SHALL BE PIPED AND DISCHARGED INTO NEAREST FLOOR DRAIN OR MOP SINK. PROVIDE FREEZE PROTECTION ON CONDENSATE PIPE WITH RAYCHEM/NVENT HEAT TRACE CABLING & FASTENER FROM THE ERV UNIT TO 2 FT FROM DISCHARGE POINT AS REQUIRED. COORDINATE EXACT FREEZE PROTECTION METHOD WITH ARCHITECT.

6. SIMPLEX WATER SOFTENER, WATER HARDNESS 16 GRAINS PER GALLON. ONLY SOFTEN WATER SERVING HOT WATER HEATER AND HYDRONIC BOILERS.

7. EXISTING WATER HEATER OR INDIRECT WATER HEATER TO REMAIN.

8. 3 SETS OF 4" VENT PIPE ON SOUTH ELEVATION ARE NOTCHED AROUND FLASHING AND CRACKING. REPLACE PIPE WITH CPVC AND PROVIDE INSECT SCREENS.

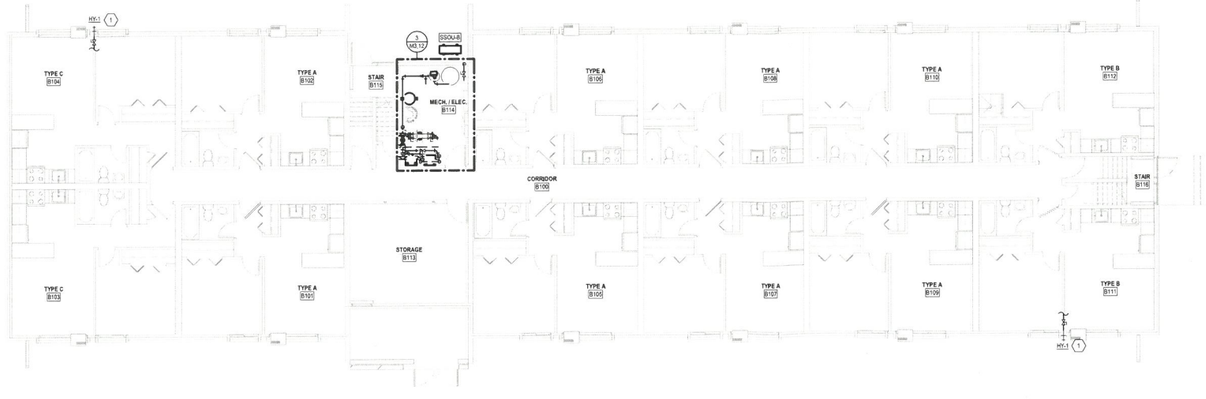
9. PLUMBING ALTERNATE: PROVIDE 40 GALLON STORAGE TANK TO SERVICE DOMESTIC HOT WATER SYSTEM IN BUILDINGS A & B.

10. PLUMBING ALTERNATE: PROVIDE THERMOSTATIC MIXING VALVE WITH STORAGE TANK TO SERVE INDIRECT WATER HEATER IN BUILDING C.

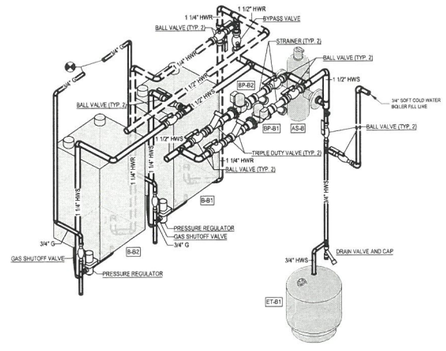
11. EXISTING UTILITY SINK IN LAUNDRY AT BUILDINGS A, B, C, & D TO REMAIN.



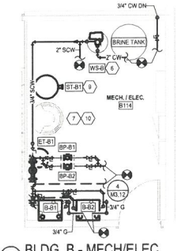
2 BLDG. B 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. B 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



4 Building B Mech Rm
NO SCALE



3 BLDG. B - MECH/ELEC.
SCALE: 1/4" = 1'-0"

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street, Suite 300, San Francisco, CA 94107 T 415.391.5282

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St., Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

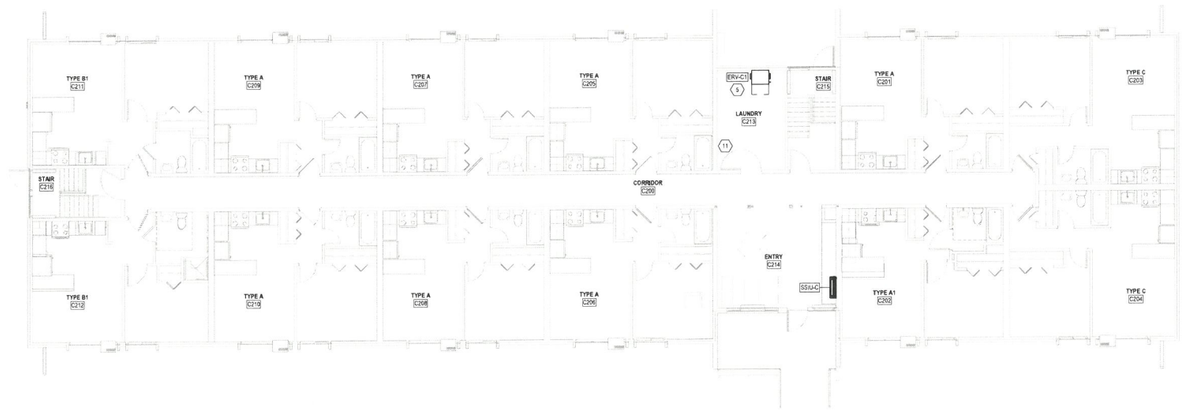
1080 Montreal Avenue
St. Paul, MN 55116

BUILDING B PIPING FLOOR PLANS

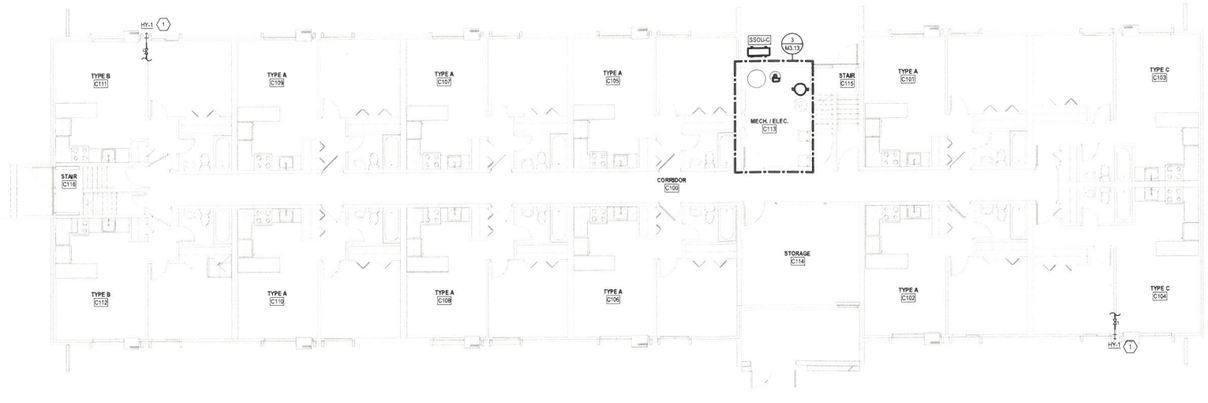
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M3.12

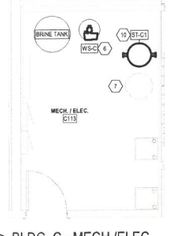
6/13/2024 4:18:59 AM



2 BLDG. C 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. C 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



3 BLDG. C - MECH./ELEC.
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE IPRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. ROTO-ROOTER TO CLEAN ALL PLUMBING LINES (ALL BUILDINGS).

K. PLUMBING ALTERNATE: REPLACE ALL WATER SUPPLY LINES THROUGHOUT THE ENTIRE BUILDING FOR ALL BUILDINGS. REUSE EXISTING ROUTING WHERE REASONABLE.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. EXISTING EXTERIOR HOSE BIBBS SHALL BE REPLACED WITH LOCKABLE CAST BRASS ANTI-SIPHON FROST-FREE SILLCOCK. INSTALL INDOOR SHUTOFF WITH BLEEDER VALVE AT EACH SILLCOCK.
2. REPLACE PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX. LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.
3. EXISTING 6" SANITARY SEWER TO BE REPAIRED USING CURED-IN-PLACE PIPE (CIOP) REHABILITATION OR OTHER SIMILAR METHOD. SEE CIVIL DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REHABILITATION.
4. EXISTING 4" SANITARY SEWER TO BE COMPLETELY REPLACED. SEE CIVIL DRAWINGS OR EXISTING DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REPLACED LINE.
5. CONDENSATE FROM ERV UNIT SHALL BE PIPED AND DISCHARGED INTO NEAREST FLOOR DRAIN OR MOP SINK. PROVIDE FREEZE PROTECTION ON CONDENSATE PIPE WITH RAYCHEM/VENT HEAT TRACE CABLING & FASTENER FROM THE ERV UNIT TO 2 FT FROM DISCHARGE POINT AS REQUIRED. COORDINATE EXACT FREEZE PROTECTION METHOD WITH ARCHITECT.
6. SIMPLEX WATER SOFTENER. WATER HARDNESS 16 GRAINS PER GALLON. ONLY SOFTEN WATER SERVING HOT WATER HEATER AND HYDRONIC BOILERS.
7. EXISTING WATER HEATER OR INDIRECT WATER HEATER TO REMAIN.
8. 3 SETS OF 4" VENT PIPE ON SOUTH ELEVATION ARE NOTCHED AROUND FLASHING AND CRACKING. REPLACE PIPE WITH CPVC AND PROVIDE INSECT SCREENS.
9. PLUMBING ALTERNATE: PROVIDE 40 GALLON STORAGE TANK TO SERVICE DOMESTIC HOT WATER SYSTEM IN BUILDINGS A & B.
10. PLUMBING ALTERNATE: PROVIDE THERMOSTATIC MIXING VALVE WITH STORAGE TANK TO SERVE INDIRECT WATER HEATER IN BUILDING C.
11. EXISTING UTILITY SINK IN LAUNDRY AT BUILDINGS A, B, C, & D TO REMAIN.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Second Street, Suite 200 San Francisco, CA 94105 T 415.281.5200

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

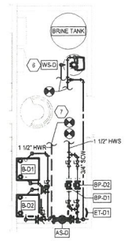
1080 Montreal Avenue
St. Paul, MN 55116

BUILDING C PIPING FLOOR PLANS

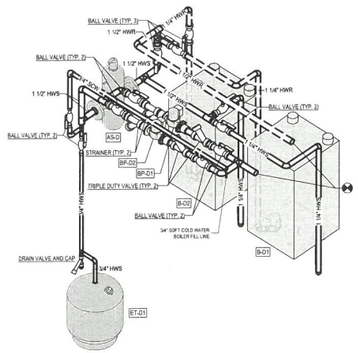
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M3.13

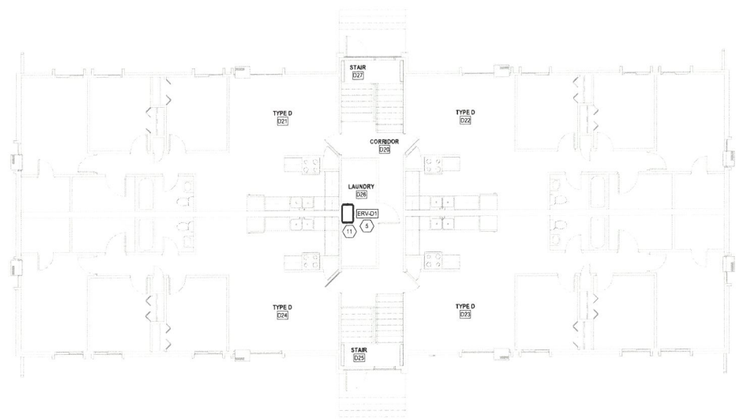
6/13/2024 4:19:00 AM



5 BLDG. D - MECH/ELEC.
SCALE: 1/4" = 1'-0"



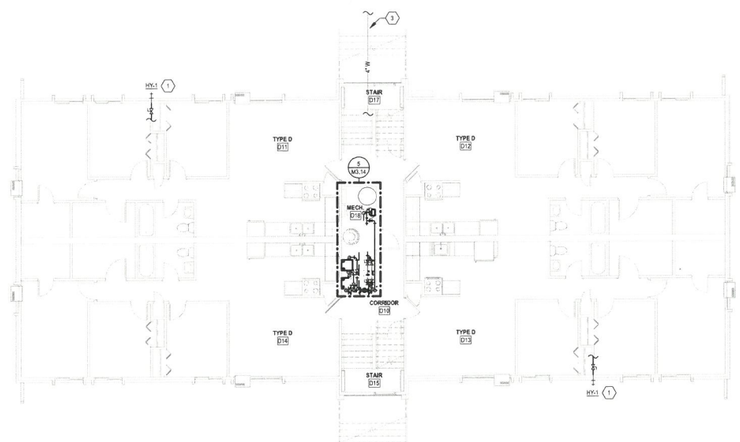
6 BLDG. D - MECH. / ELECT. 3D PIPING DIAGRAM
NO SCALE



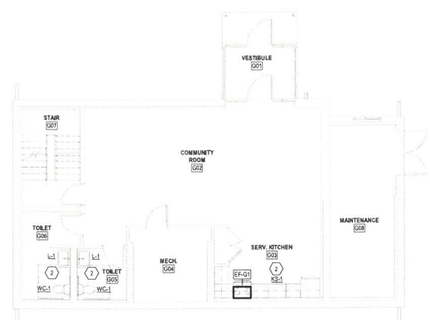
4 BLDG. D 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



2 BLDG. G 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



3 BLDG. D 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. G 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"

6/13/2024 4:19:03 AM

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. ROTO-ROOTER TO CLEAN ALL PLUMBING LINES (ALL BUILDINGS).

K. PLUMBING ALTERNATE: REPLACE ALL WATER SUPPLY LINES THROUGHOUT THE ENTIRE BUILDING FOR ALL BUILDINGS. REUSE EXISTING ROUTING WHERE REASONABLE.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. EXISTING EXTERIOR HOSE BIBBS SHALL BE REPLACED WITH LOCKABLE CAST BRASS ANTI-SIPHON FROST-FREE SILLCOCK. INSTALL INDOOR SHUTOFF WITH BLEEDER VALVE AT EACH SILLCOCK.

2. REPLACE PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

3. EXISTING 6" SANITARY SEWER TO BE REPAIRED USING CURED-IN-PLACE PIPE (CIP) REHABILITATION OR OTHER SIMILAR METHOD. SEE CIVIL DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REHABILITATION.

4. EXISTING 4" SANITARY SEWER TO BE COMPLETELY REPLACED. SEE CIVIL DRAWINGS OR EXISTING DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &/OR EXTENT OF REPLACED LINE.

5. CONDENSATE FROM ERV UNIT SHALL BE PIPED AND DISCHARGED INTO NEAREST FLOOR DRAIN OR MOP SINK. PROVIDE FREEZE PROTECTION ON CONDENSATE PIPE WITH RAYCHEM/NVENT HEAT TRACE CABLING & FASTENER FROM THE ERV UNIT TO 2 FT FROM DISCHARGE POINT AS REQUIRED. COORDINATE EXACT FREEZE PROTECTION METHOD WITH ARCHITECT.

6. SIMPLEX WATER SOFTENER. WATER HARDNESS 16 GRAINS PER GALLON. ONLY SOFTEN WATER SERVING HOT WATER HEATER AND HYDRONIC BOILERS.

7. EXISTING WATER HEATER OR INDIRECT WATER HEATER TO REMAIN.

8. 3 SETS OF 4" VENT PIPE ON SOUTH ELEVATION ARE NOTCHED AROUND FLASHING AND CRACKING. REPLACE PIPE WITH CPVC AND PROVIDE INSECT SCREENS.

9. PLUMBING ALTERNATE: PROVIDE 40 GALLON STORAGE TANK TO SERVICE DOMESTIC HOT WATER SYSTEM IN BUILDINGS A & B.

10. PLUMBING ALTERNATE: PROVIDE THERMOSTATIC MIXING VALVE WITH STORAGE TANK TO SERVE INDIRECT WATER HEATER IN BUILDING C.

11. EXISTING UTILITY SINK IN LAUNDRY AT BUILDINGS A, B, C, & D TO REMAIN.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN — SAN FRANCISCO | DENVER | WASHINGTON
222 Sutter Street, Suite 300 San Francisco, CA 94107 T 415.391.5282

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #
06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

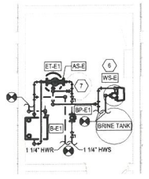
CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

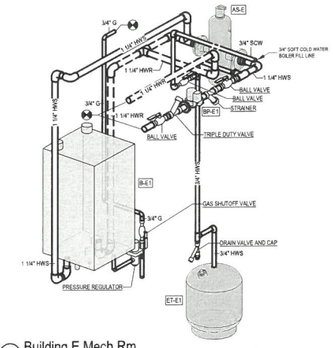
BUILDING D & G PIPING FLOOR PLANS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

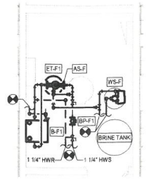
M3.14



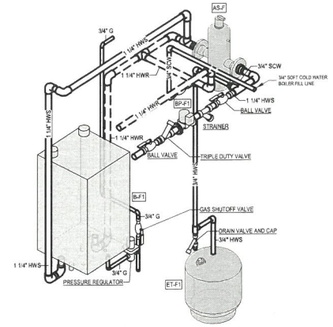
5 BLDG. E - MECH/ELEC.
SCALE: 1/4" = 1'-0"



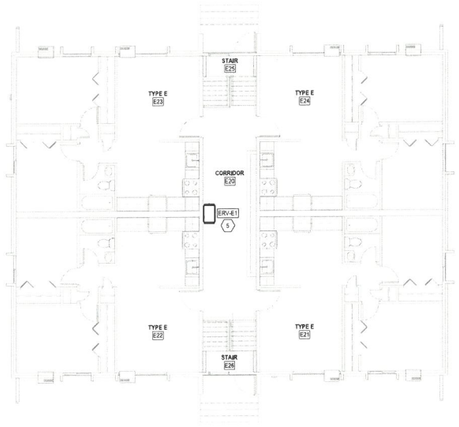
6 Building E Mech Rm
NO SCALE



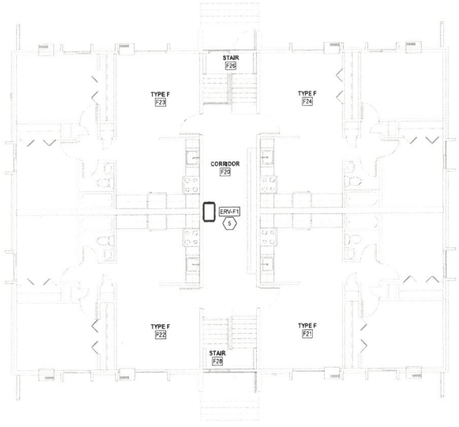
7 BLDG. F - MECH/ELEC.
SCALE: 1/4" = 1'-0"



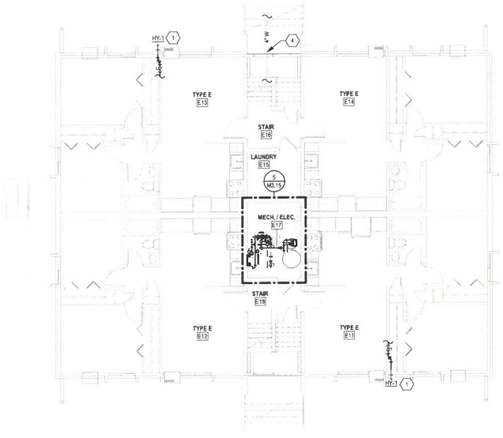
8 Building F Mech Rm
NO SCALE



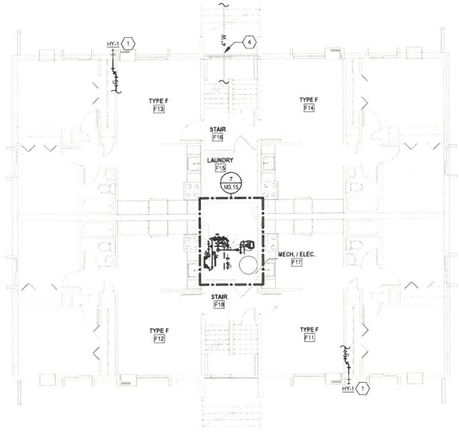
4 BLDG. E 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



2 BLDG. F 2ND FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



3 BLDG. E 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



1 BLDG. F 1ST FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. REFER TO SHEET M0.00 FOR ADDITIONAL GENERAL NOTES.

B. PROVIDE RADIATION DAMPERS, FIRE DAMPERS, SMOKE DAMPERS AND FIRE/SMOKE DAMPERS WHERE REQUIRED BY CODE. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS.

C. ALL DUCTWORK SHALL BE SHEET METAL FABRICATED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.

D. MAINTAIN 10' MINIMUM SEPARATION BETWEEN ALL OUTSIDE AIR INTAKE OPENINGS AND EXHAUST OR VENT OPENINGS.

E. PROVIDE MANUAL BALANCING DAMPERS IN BRANCH DUCT TAKE-OFFS WHERE REQUIRED BY LOCAL AHJ.

F. PROVIDE ACCESS PANELS WHERE REQUIRED FOR MECHANICAL DEVICES LOCATED BEHIND OR ABOVE HARD LID WALLS OR CEILINGS THAT REQUIRE SERVICE.

G. MOUNT THERMOSTAT AT 48 INCHES AFF UNLESS NOTED OTHERWISE.

H. WALL CAPS TO BE PRIMEX WITH EXACT MODEL COORDINATED WITH THE EXTERIOR ASSEMBLY AT EACH LOCATION. EXHAUST TO HAVE A BACKDRAFT DAMPER AND INSECT SCREEN. DRYER TO HAVE A BACKDRAFT DAMPER. OUTLET TO BE OPEN. EXHAUST DUCT SHALL BE INSULATED AND WRAPPED PER CODE.

I. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

J. ROTO-ROOTER TO CLEAN ALL PLUMBING LINES (ALL BUILDINGS).

K. PLUMBING ALTERNATE: REPLACE ALL WATER SUPPLY LINES THROUGHOUT THE ENTIRE BUILDING FOR ALL BUILDINGS. REUSE EXISTING ROUTING WHERE REASONABLE.

KEY NOTES:

(NOT ALL NOTES MAY BE USED ON THIS SHEET)

1. EXISTING EXTERIOR HOSE BIBBS SHALL BE REPLACED WITH LOCKABLE CAST BRASS ANTI-SIPHON FROST-FREE SILLCOCK, INSTALL INDOOR SHUTOFF WITH BLEEDER VALVE AT EACH SILLCOCK.

2. REPLACE PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.

3. EXISTING 4" SANITARY SEWER TO BE REPAIRED USING CURED-IN-PLACE PIPE (CIPP) REHABILITATION OR OTHER SIMILAR METHOD. SEE CIVIL DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &OR EXTENT OF REHABILITATION.

4. EXISTING 4" SANITARY SEWER TO BE COMPLETELY REPLACED. SEE CIVIL DRAWINGS OR EXISTING DRAWINGS FOR EXACT SANITARY SEWER CONNECTION LOCATION. COORDINATE WITH OWNERSHIP THE LENGTH &OR EXTENT OF REPLACED LINE.

5. CONDENSATE FROM ERV UNIT SHALL BE PIPED AND DISCHARGED INTO NEAREST FLOOR DRAIN OR MOP SINK. PROVIDE FREEZE PROTECTION ON CONDENSATE PIPE WITH RAYCHEM/NVENT HEAT TRACE CABLING & FASTENER FROM THE ERV UNIT TO 2 FT FROM DISCHARGE POINT AS REQUIRED. COORDINATE EXACT FREEZE PROTECTION METHOD WITH ARCHITECT.

6. SIMPLEX WATER SOFTENER. WATER HARDNESS 18 GRAINS PER GALLON. ONLY SOFTEN WATER SERVING HOT WATER HEATER AND HYDRONIC BOILERS.

7. EXISTING WATER HEATER OR INDIRECT WATER HEATER TO REMAIN.

8. 3 SETS OF 4" VENT PIPE ON SOUTH ELEVATION ARE NOTCHED AROUND FLASHING AND CRANKING. REPLACE PIPE WITH CPVC AND PROVIDE INSECT SCREENS.

9. PLUMBING ALTERNATE: PROVIDE 40 GALLON STORAGE TANK TO SERVICE DOMESTIC HOT WATER SYSTEM IN BUILDINGS A & B.

10. PLUMBING ALTERNATE: PROVIDE THERMOSTATIC MIXING VALVE WITH STORAGE TANK TO SERVE INDIRECT WATER HEATER IN BUILDING C.

11. EXISTING UTILITY SINK IN LAUNDRY AT BUILDINGS A, B, C, & D TO REMAIN.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SUSTAINABILITY | SERVICE | SIGNIFICANCE
222 Bryant Street Suite 300 San Francisco, CA 94107 T 415.391.5232

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

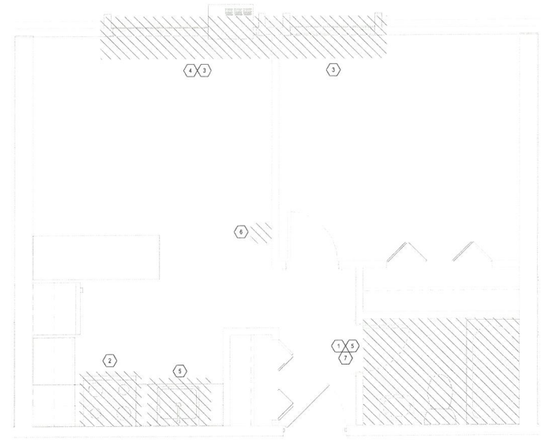
1080 Montreal Avenue
St. Paul, MN 55116

BUILDING E & F PIPING FLOOR PLANS

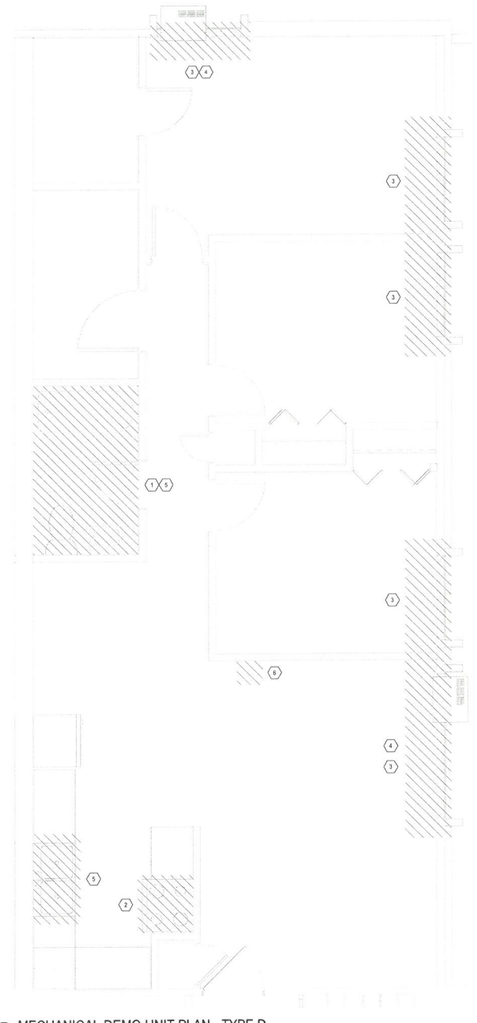
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M3.15

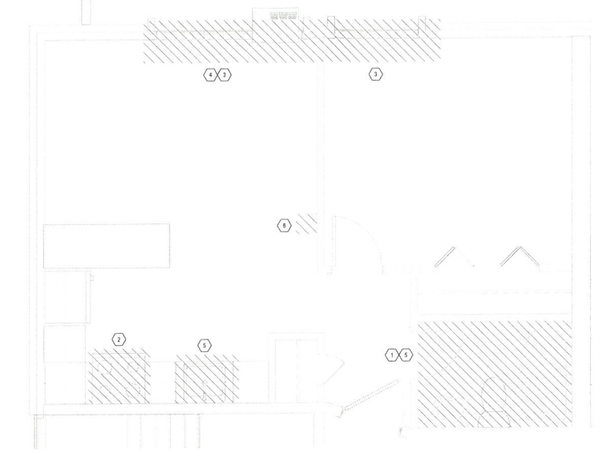
6/13/2024 4:19:05 AM



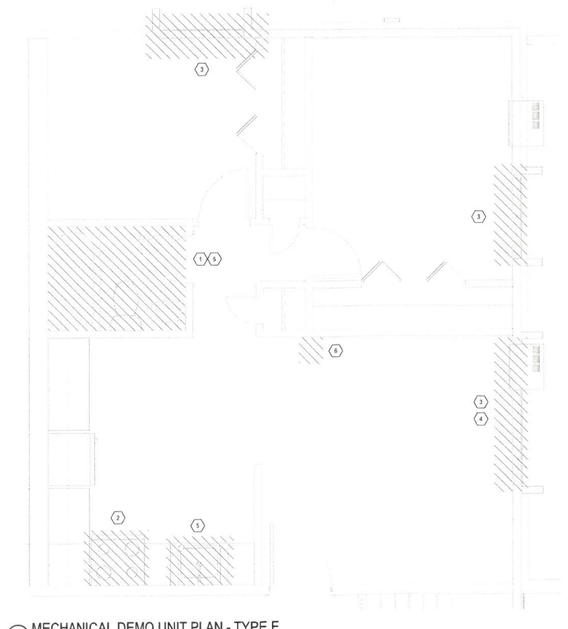
1 MECHANICAL DEMO UNIT PLAN - TYPE A
SCALE: 3/8" = 1'-0"



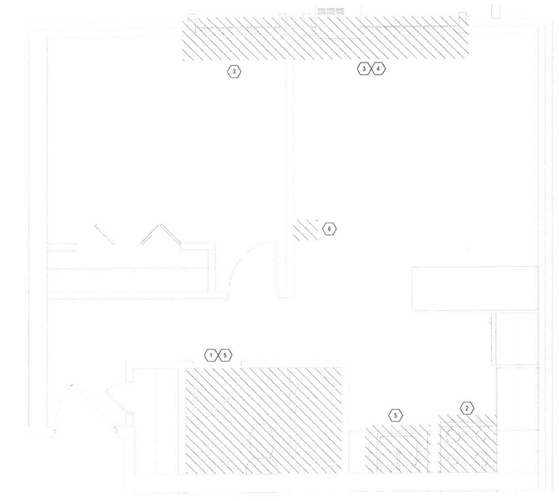
4 MECHANICAL DEMO UNIT PLAN - TYPE D
SCALE: 3/8" = 1'-0"



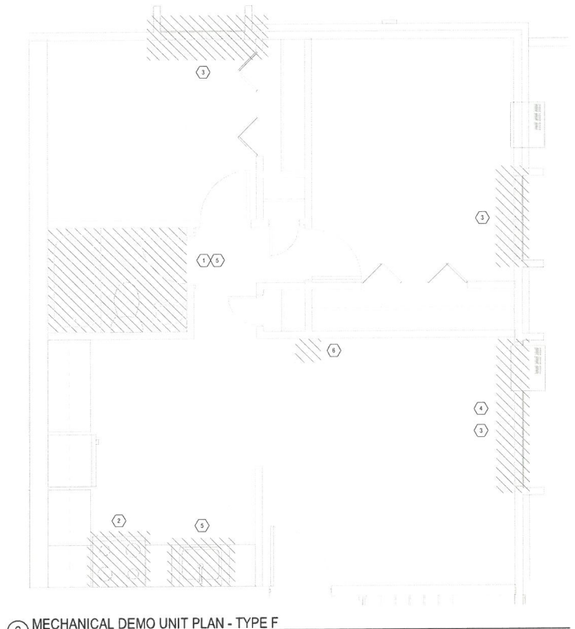
2 MECHANICAL DEMO UNIT PLAN - TYPE B
SCALE: 3/8" = 1'-0"



5 MECHANICAL DEMO UNIT PLAN - TYPE E
SCALE: 3/8" = 1'-0"



3 MECHANICAL DEMO UNIT PLAN - TYPE C
SCALE: 3/8" = 1'-0"



6 MECHANICAL DEMO UNIT PLAN - TYPE F
SCALE: 3/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET M0.00 FOR GENERAL NOTES.

B. COORDINATE WITH STRUCTURAL WHEN DRILLING THROUGH STRUCTURAL MEMBERS.

C. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

D. ALL EQUIPMENT AND COMPONENTS SHALL BE INSTALLED IN LOCATIONS THAT ARE READILY ACCESSIBLE FOR ROUTINE MAINTENANCE.

E. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING INVERT ELEVATIONS, LOCATIONS, AND SIZES PRIOR TO INSTALLING ANY PIPING.

F. DO NOT RUN ANY PIPING THROUGH, OVER, OR UNDER ELECTRICAL EQUIPMENT. PROVIDE CLEARANCE IN ACCORDANCE WITH THE NEC.

KEY NOTES:

1. DEMO EXISTING BATHROOM EXHAUST FAN AND DUCTWORK IF DAMAGED BEYOND REUSE.
2. DEMO EXISTING KITCHEN HOOD AND VERIFY QUALITY OF EXISTING DUCTWORK TO THE OUTDOORS BEFORE REUSE OR REPLACE IF NECESSARY.
3. DEMO EXISTING THERMOSTATIC RADIATOR VALVE AND COVERS FOR BASEBOARD RADIATORS. REMOVE COVERS FROM ALL BASEBOARD RADIATORS.
4. DEMO EXISTING THROUGH WINDOW A/R CONDITIONERS.
5. DEMO EXISTING UNIT PLUMBING FIXTURES: KITCHEN SINK, KITCHEN FAUCET, WATER CLOSET, AND LAVATORY FAUCET, INCLUDING ANY EXPOSED PIPING UNDER FIXTURES. INSULATED COVER AT EXPOSED SINK PIPING, FLEX LINES, SHOWER VALVE CONTROLS, AND SHUT-OFF VALVES. PIPING IN WALL TO REMAIN UNLESS DAMAGED BEYOND REUSE. LAVATORY SINK TO REMAIN.
6. DEMO EXISTING THERMOSTAT.
7. DEMO EXISTING BATHTUB IN TYPE A.1 UNITS ONLY.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Sutter Street, Suite 300, San Francisco, CA 94108 T 415.834.3232

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

License #: 58755

Date: 06/13/2024

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

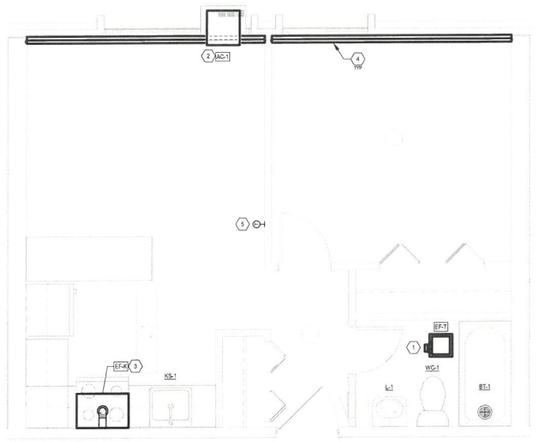
1080 Montreal Avenue
St. Paul, MN 55116

ENLARGED MECHANICAL DEMOLITION UNIT PLANS

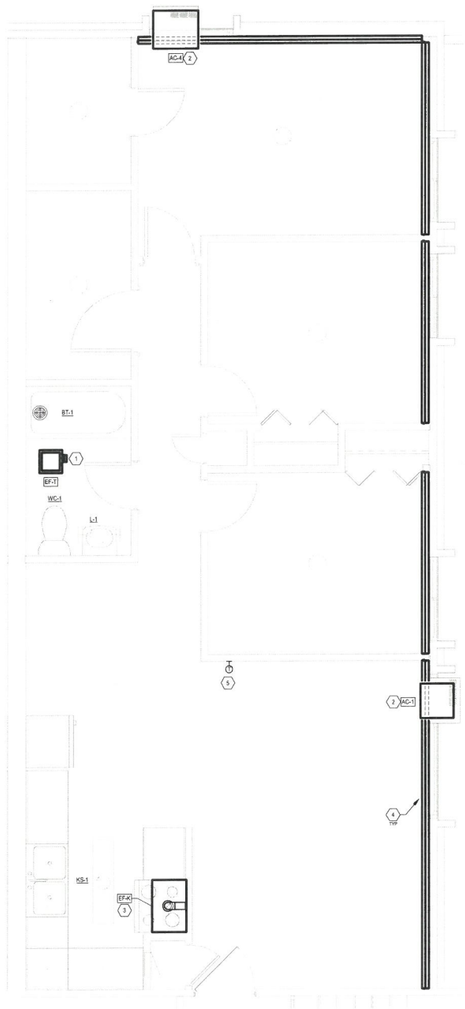
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M5.10

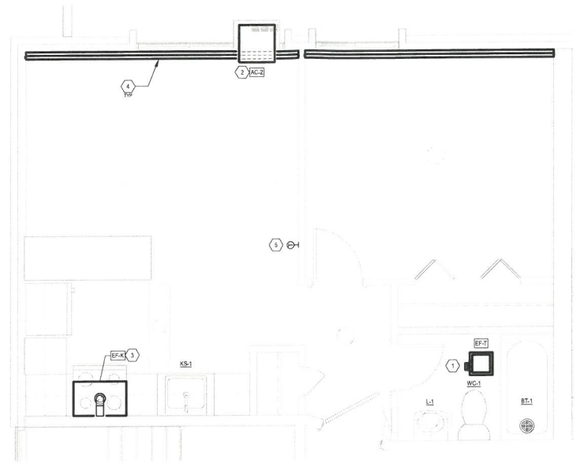
6/13/2024 4:19:07 AM



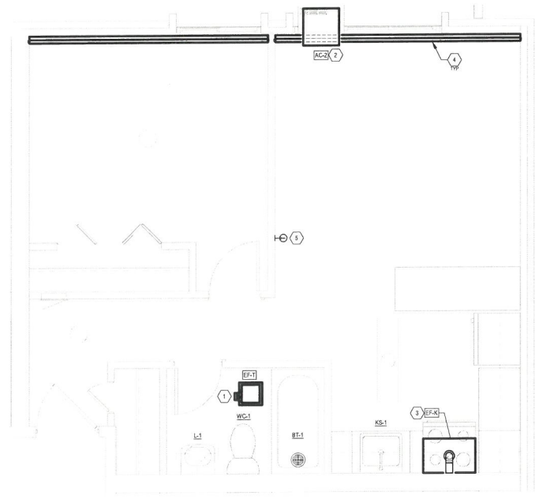
1 MECHANICAL UNIT PLAN - TYPE A
SCALE: 3/8" = 1'-0"



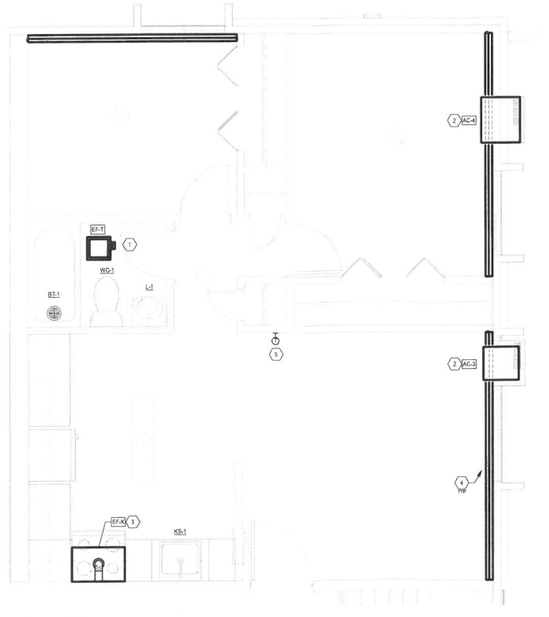
4 MECHANICAL UNIT PLAN - TYPE D
SCALE: 3/8" = 1'-0"



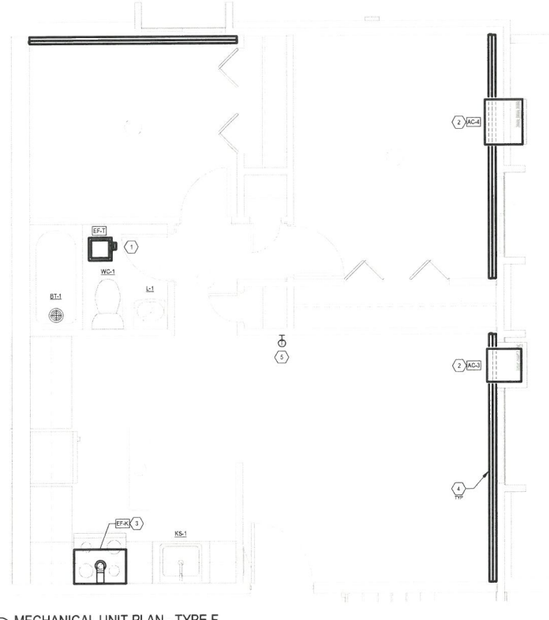
2 MECHANICAL UNIT PLAN - TYPE B
SCALE: 3/8" = 1'-0"



3 MECHANICAL UNIT PLAN - TYPE C
SCALE: 3/8" = 1'-0"



5 MECHANICAL UNIT PLAN - TYPE E
SCALE: 3/8" = 1'-0"



6 MECHANICAL UNIT PLAN - TYPE F
SCALE: 3/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET M0.00 FOR GENERAL NOTES.

B. COORDINATE WITH STRUCTURAL WHEN DRILLING THROUGH STRUCTURAL MEMBERS.

C. COORDINATE ALL ROUTING WITH ALL OTHER TRADES.

D. ALL EQUIPMENT AND COMPONENTS SHALL BE INSTALLED IN LOCATIONS THAT ARE READILY ACCESSIBLE FOR ROUTINE MAINTENANCE.

E. CONTRACTOR SHALL FIELD VERIFY ALL PLUMBING INVERT ELEVATIONS, LOCATIONS, AND SIZES PRIOR TO INSTALLING ANY PIPING.

F. DO NOT RUN ANY PIPING THROUGH, OVER, OR UNDER ELECTRICAL EQUIPMENT. PROVIDE CLEARANCE IN ACCORDANCE WITH THE NEC.

KEY NOTES:

1. ENERGY STAR, TWO SPEED, LOW NOISE EXHAUST FAN LOCATED IN CEILING. PROVIDE WITH CEILING RADIATION DAMPER &OR RATED BOX TO MAINTAIN CEILING RATING PER CODE. CONNECT TO EXISTING DUCTWORK OR NEWLY REPLACED DUCTWORK WHERE DAMAGED BEYOND REUSE. COORDINATE FINAL LOCATION WITH ARCHITECT.
2. PACKAGED, SELF-CONTAINED COOLING UNIT. BUILT IN THERMOSTAT WITH AUTOCHANGER AND 7-DAY PROGRAMMABLE FUNCTIONALITY. INSTALL IN DWELLING UNIT LIVING ROOM WINDOW. IN TYPE D (3-BEDROOM) AND TYPE E & F (2-BEDROOM) UNITS, AN ADDITIONAL AC SHALL BE INSTALLED IN THE BEDROOM AS INDICATED ON PLAN.
3. ENERGY STAR RATED RANGE HOOD, CONNECT TO EXISTING EXHAUST DUCT WORK OR NEWLY REPLACED DUCTWORK WHERE DAMAGED BEYOND REUSE.
4. REPLACE/INSTALL NEW HYDRONIC BASEBOARD HEATING COVERS ON ALL BASEBOARD HEATERS WITH HEAVY DUTY INSTITUTIONAL GRADE COVERS. REPLACE THERMOSTATIC RADIATOR VALVES.
5. ENERGY STAR RATED THERMOSTAT. MOUNT THERMOSTAT AT 48" AFF IN TYPE A1 & TYPE B1 UNITS ONLY. COORDINATE EXACT LOCATION WITH ARCHITECT.

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | DENVER | BRANCASTLE
222 Bryant Street Suite 300 San Francisco, CA 94107 T 415.781.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

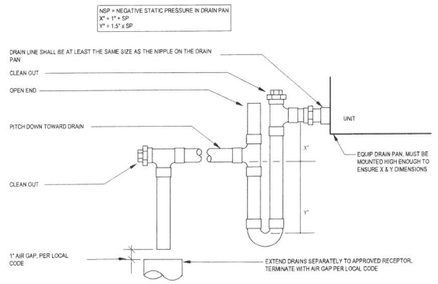
1080 Montreal Avenue
St. Paul, MN 55116

ENLARGED MECHANICAL UNIT PLANS

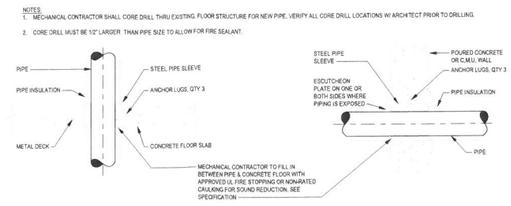
ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M5.11

6/13/2024 4:19:07 AM



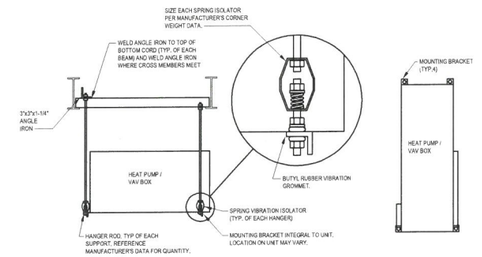
7 COND DRAIN P-TRAP DETAIL
NO SCALE



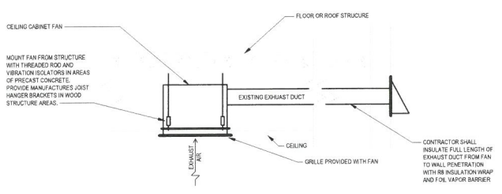
PIPE SLEEVE THROUGH FLOOR

PIPE SLEEVE THROUGH WALL

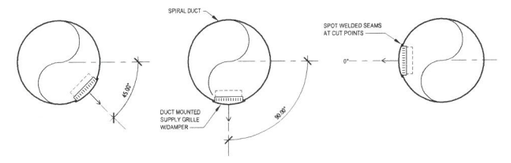
4 PIPE PENETRATION DETAIL
NO SCALE



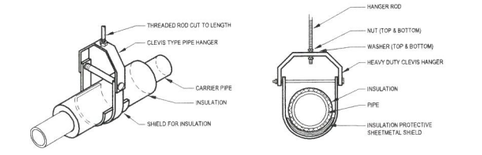
1 EQUIPMENT HANGING DETAIL
NO SCALE



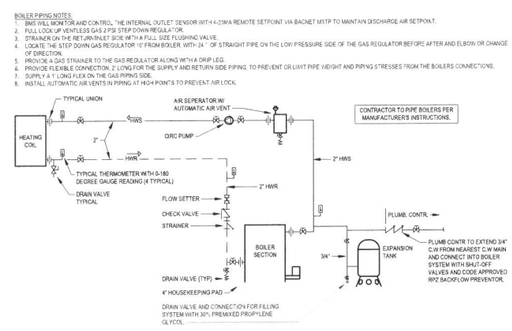
8 BATHROOM EXHAUST FAN DETAIL
NO SCALE



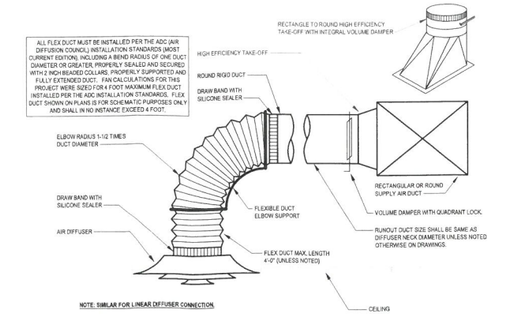
5 DUCT MOUNTED SUPPLY GRILLE DETAIL
NO SCALE



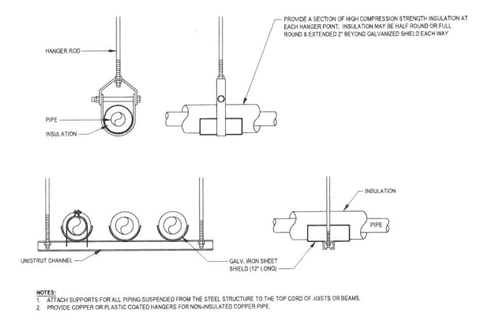
2 PIPE HANGER AND SUPPORT DETAIL
NO SCALE



9 BOILER AND PUMP PIPING DIAGRAM
NO SCALE



6 TYPICAL DIFFUSER CONNECTION
NO SCALE



3 PIPE INSULATION DETAIL
NO SCALE

6/13/2024 4:19:08 AM

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | NEW YORK/DOCO | DENVER | MINNEAPOLIS
222 Bryant Street, Suite 300 San Francisco, CA 94107 T 415.281.5300

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

MECHANICAL DETAILS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M6.10

VAN METER WILLIAMS POLLACK LLP

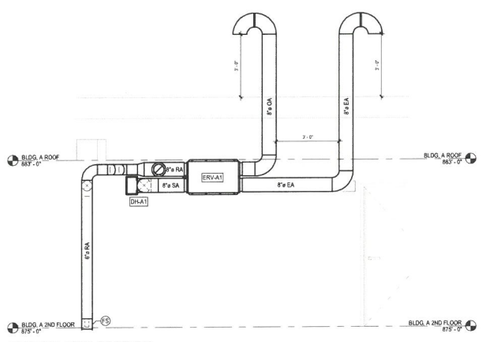
ARCHITECTURE | URBAN DESIGN ■ SAN FRANCISCO | DENVER | MINNEAPOLIS
222 Bryant Street Suite 300 San Francisco, CA 94107 T 415.391.5282

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

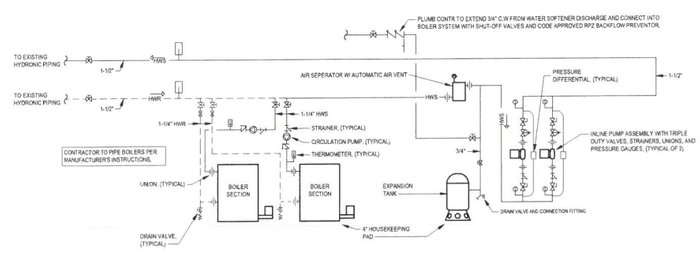
LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

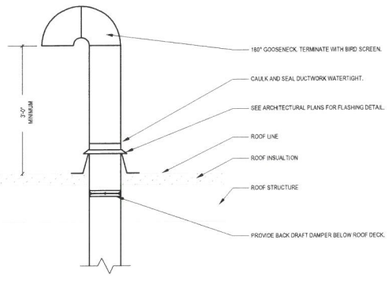
STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401



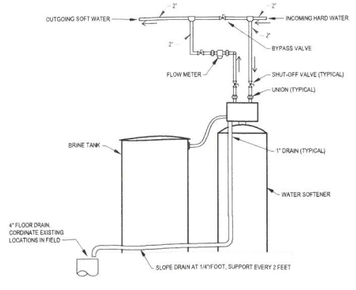
1 TYPICAL ERV SECTION
NO SCALE



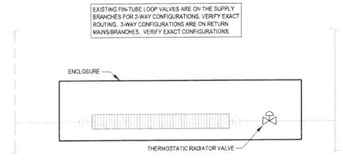
2 BOILER PIPING SCHEMATIC
NO SCALE



3 GOOSENECK THROUGH ROOF DETAIL
NO SCALE



4 WATER SOFTENER DETAIL (SMALL)
NO SCALE



5 FINNED TUBE RADIATION DETAIL (CONTROL VALVE)
NO SCALE

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

621 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1080 Montreal Avenue
St. Paul, MN 55116

MECHANICAL DETAILS

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: As indicated

M6.11

6/13/2024 4:19:08 AM

DUCT COIL - ELECTRIC SCHEDULE

NOTES:
1. UNIT SHALL HAVE INTEGRAL THERMOSTAT WITH SCR CONTROLLER.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT.
3. AUTOMATIC LIMIT SWITCH FOR PRIMARY OVER-TEMPERATURE PROTECTION.
4. UNIT SHALL BE CAPABLE OF MAINTAINING 70°F LEAVING AIR TEMPERATURE.

	LOCATION												ELECTRICAL DATA						
MARK	ROOM NAME	ROOM NO	SERVES	MANUFACTURER	MODEL	AIRFLOW (CFM)	AIR PD (IN WG)	EAT (°F)	LAT (°F)	INPUT (KW)	ELEMENT TYPE	CONTROL	STAGES	COIL SIZE H x L (INCHES)	VOLTS	PHASE	FLA	MCA	MOCP	NOTES	MARK
DH-A1	STORAGE	A214	ERV-A1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-A1
DH-B1	LAUNDRY	B214	ERV-B1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-B1
DH-C1	LAUNDRY	C213	ERV-C1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-C1
DH-D1	LAUNDRY	D26	ERV-D1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-D1
DH-E1	CORRIDOR	E20	ERV-E1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-E1
DH-F1	CORRIDOR	F20	ERV-F1	RENEWAIRE	RHD12D4-E	250	0.6	45	70	2	OPEN-COIL	INTEGRAL	1	6X8	120	1	16.66	0	20	ALL	DH-F1

HYDRONIC EXPANSION TANK SCHEDULE

NOTES:
1. STAND MODEL HYDRONIC EXPANSION TANK RATED FOR 100 PSIG WORKING PRESSURE.

	LOCATION					TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	ASME RATING (PSI)	FACTORY CHARGE PRESSURE (PSI)	OPERATING PRESSURE (PSI)	RV SETTING (PSI)	OPERATING TEMP (°F)	SIZE D x H (IN)	NOTES	MARK
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL	SERVICE										
ET-A1	MECH. / ELECT.	A113	AMTROL	SX-60V	BUILDING A BOILER PLANT	32	11.2	100	12	27	30	180	15 x 48	ALL	ET-A1
ET-B1	MECH. / ELEC.	B114	AMTROL	SX-60V	BUILDING A BOILER PLANT	32	11.2	100	12	27	30	180	15 x 48	ALL	ET-B1
ET-D1	MECH.	D18	AMTROL	SX-60V	BUILDING A BOILER PLANT	32	11.2	100	12	27	30	180	15 x 48	ALL	ET-D1
ET-E1	MECH / ELEC.	E17	AMTROL	SX-60V	BUILDING A BOILER PLANT	32	11.2	100	12	27	30	180	15 x 48	ALL	ET-E1
ET-F1	LAUNDRY	F29	AMTROL	SX-60V	BUILDING A BOILER PLANT	32	11.2	100	12	27	30	180	15 x 48	ALL	ET-F1

SPLIT SYSTEM COOLING INDOOR UNIT SCHEDULE

NOTES:
1. *"ALTERNATE FOR BIDDING PURPOSES ONLY"*
2. *HVAC CONTRACTOR SHALL PROVIDE SYSTEM ACCORDING TO MANUFACTURE'S PIPING INSTRUCTIONS. WHICH INCLUDES ALL REQUIRED EQUIPMENT TO INSTALL THE SYSTEM. ROUTE REFRIGERANT LINE TO UNIT ACCORDING TO MANUFACTURES PIPING INSTRUCTIONS, INCLUDING PIPING OF SOLENOID VALVES.*
3. *I-SEE SENSOR CORNER PANEL.*
4. *HARD WIRED PROGRAMMABLE THERMOSTAT, #FAR-314MA, WITH EACH UNIT.*
5. *INTEGRAL DRAIN LIFT MECHANISM ON INDOOR FAN COIL CAPABLE OF 33-INCHES OF LIFT.*
6. *POWER IS WIRED THROUGH OUTDOOR UNIT, REFER TO INSTALLATION INSTRUCTIONS.*

	LOCATION					NOMINAL CAPACITY (TONS)	CAP (MBH)	FAN DATA			ELECTRICAL DATA					MOUNTING	WEIGHT (LBS)	NOTES	MARK
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL	TYPE			CFM	ESP	HP	VOLTS	PHASE	FLA	MCA	MOCP				
SSU-A	ENTRY	A114	MITSUBISHI	PKA-A24KA8	WALL	2	24	700	0.1	69W	240	1	0.3	1	25	SURFACE	51	ALL	SSU-A
SSU-B	STORAGE	B113	MITSUBISHI	PKA-A24KA8	WALL	2	24	700	0.1	69W	240	1	0.3	1	25	SURFACE	51	ALL	SSU-B
SSU-C	STORAGE	C114	MITSUBISHI	PKA-A24KA8	WALL	2	24	700	0.1	69W	240	1	0.3	1	25	SURFACE	51	ALL	SSU-C

SPLIT SYSTEM COOLING OUTDOOR UNIT SCHEDULE

NOTES:
1. *"ALTERNATE FOR BIDDING PURPOSES ONLY"*
2. *HVAC CONTRACTOR SHALL PROVIDE SYSTEM ACCORDING TO MANUFACTURE'S PIPING INSTRUCTIONS. WHICH INCLUDES ALL REQUIRED EQUIPMENT TO INSTALL THE SYSTEM. ROUTE REFRIGERANT LINE TO UNIT ACCORDING TO MANUFACTURES PIPING INSTRUCTIONS, INCLUDING PIPING OF SOLENOID VALVES. REFRIGERATION PIPING SHALL HAVE 1-INCH ARMAFLEX INSULATION PAINTED WITH UV RESISTANT PAINT ON ALL REFRIGERANT PIPING LOCATED OUTDOORS.*
3. *INSTALL CONDENSING UNIT WITH RUBBER SUPPORT BLOCKS. MAINTAIN MANUFACTURER REQUIRED CLEARANCES.*
4. *LOW AMBIENT KIT FOR OPERATION DOWN TO 0°F.*

	LOCATION				NOMINAL CAPACITY (TONS)	REFRIGERANT TYPE	CAPACITY		COMPRESSOR		ELECTRICAL DATA						WEIGHT (LBS)	NOTES	MARK
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL			CLG (MBH)	SEER / EER	RLA	LRA	VOLTS	PHASE	FLA	MCA	MOCP	MOUNTING			
SSOU-A	EXTERIOR	---	MITSUBISHI	PUY-A24NHA4	2	R-410A	24	17	12	14	240	1	8.2	19	25	GRADE	163	ALL	SSOU-A
SSOU-B	EXTERIOR	---	MITSUBISHI	PUY-A24NHA4	2	R-410A	24	17	12	14	240	1	8.2	19	25	GRADE	163	ALL	SSOU-B
SSOU-C	EXTERIOR	---	MITSUBISHI	PUY-A24NHA4	2	R-410A	24	17	12	14	240	1	8.2	19	25	GRADE	163	ALL	SSOU-C

WATER HEATER - GAS SCHEDULE

NOTES:
1. *"ALTERNATE FOR BIDDING PURPOSES ONLY"*
2. *CSD-1 CONTROLS.*
3. *CONDENSATE NEUTRALIZATION KIT.*
4. *VENT TERMINATION CAP FOR DIRECT INLET AIR DUCT.*
5. *VENT TERMINATION CAP FOR EXHAUST VENT.*
6. *INSTALL UNIT ON 4-INCH CONCRETE HOUSEKEEPING PAD.*

	LOCATION					WATER DATA		GAS DATA			VENT DATA		ELECTRICAL DATA						
MARK	ROOM NAME	ROOM NO	SERVES	MANUFACTURER	MODEL	TANK CAPACITY (GALS)	EWT (°F)	LWT (°F)	RECOVERY (GPH)	CONN. (IN)	MAX INPUT (MBH)	MAX OUTPUT (MBH)	THERMAL EFF. (%)	CONN. (IN)	MATERIAL	VOLTS	PHASE	FLA	MCA	MOCP	NOTES	MARK
WHA[E]	MECH. / ELECT.	A113	BUILDING A	A.O. SMITH	BTH-199	100	40	120	296	1-1/2"	199.9	193.9	97	4	PVC	120	1	5	6.25	15	ALL	WHA[E]
WHB[E]	MECH. / ELEC.	B114	BUILDING B	A.O. SMITH	BTH-199	100	40	120	296	1-1/2"	199.9	193.9	97	4	PVC	120	1	5	6.25	15	ALL	WHB[E]

DOMESTIC STORAGE TANK SCHEDULE

NOTES:
1. *"ALTERNATE FOR BIDDING PURPOSES ONLY"*
2. *150 PSI WORKING PRESSURE. ALL WATER CONNECTIONS ARE 3/4".*

	LOCATION							NOMINAL CAP. (GAL)	SIZE D x H (IN)	NOTES	MARK
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL	SERVICE	TYPE	LINING				
ST-A1	MECH. / ELECT.	A113	BRADFORD WHITE	ASTI-40-6	DOMESTIC HOT WATER	VERTICAL STAND	VITRACLAS	40	20X48	ALL	ST-A1
ST-B1	MECH. / ELEC.	B114	BRADFORD WHITE	ASTI-40-6	DOMESTIC HOT WATER	VERTICAL STAND	VITRACLAS	40	20X48	ALL	ST-B1
ST-C1	MECH. / ELEC.	C113	BRADFORD WHITE	ASTI-40-6	DOMESTIC HOT WATER	VERTICAL STAND	VITRACLAS	40	20X48	ALL	ST-C1

WATER SOFTENER SCHEDULE

NOTES:
1. CONTRACTOR TO VERIFY LOCATIONS, INSTALLATION METHODS, AND QUANTITIES PRIOR TO ORDERING MATERIALS.
2. LOCATE UNIT ON CONCRETE PAD.
3. PROVIDE FLOW METER.
4. INSTALL BYPASS.
5. PROVIDE BRINE RECLAMATION OPTION.
6. PROVIDE CONTROL VALVE.

	LOCATION							PEAK FLOW		CONTINUOUS FLOW		DIMENSIONS					
												SOFTENER TANK		BRINE TANK			
MARK	ROOM NAME	ROOM NO	SERVES	MANUFACTURER	MODEL	CONFIGURATION	RESIN (CU/FT)	MAX SALT PER RESIN	WATER FLOW (GPM)	PRESSURE DROP (PSI)	WATER FLOW (GPM)	PRESSURE DROP (PSI)	DIA (IN)	HEIGHT (IN)	DIA (IN)	HEIGHT (IN)	PIPE SIZE (IN)	NOTES
WS-A	MECH / ELECT	A113	BUILDING A	WATER CONTROL CORPORATION	LF-180-SIMPLEX	SIMPLEX	6	180	82	25	64	15	21	62	24	50	2	ALL
WS-B	MECH. / ELEC	B114	BUILDING B	WATER CONTROL CORPORATION	LF-180-SIMPLEX	SIMPLEX	6	180	82	25	64	15	21	62	24	50	2	ALL
WS-C	MECH. / ELEC	C113	BUILDING C	WATER CONTROL CORPORATION	LF-180-SIMPLEX	SIMPLEX	6	180	82	25	64	15	21	62	24	50	2	ALL
WS-D	MECH.	D18	BUILDING D	WATER CONTROL CORPORATION	LF-90-SIMPLEX	SIMPLEX	3	90	55	25	40	15	14	65	24	50	2	ALL
WS-E	MECH. / ELEC	E17	BUILDING E	WATER CONTROL CORPORATION	LF-90-SIMPLEX	SIMPLEX	3	90	55	25	40	15	14	65	24	50	2	ALL
WS-F	LAUNDRY	F29	BUILDING F	WATER CONTROL CORPORATION	LF-90-SIMPLEX	SIMPLEX	3	90	55	25	40	15	14	65	24	50	2	ALL

ENERGY RECOVERY VENTILATOR SCHEDULE

NOTES:
1. ERV HUNG FROM STRUCTURE WITH VIBRATION ISOLATORS IN ATTIC SPACE.
2. *PROVIDE FACTORY MOUNTED CONTROLS, SINGLE POINT POWER CONNECTION.*
3. FAN TO RUN CONTINUOUSLY.
4. *PROVIDE FACTORY OPTION 12KV 2KW ELECTRIC HEATER WITH INTEGRAL THERMOSTAT.*
5. HARD WIRED POWER CONNECTION ONLY.

	LOCATION					SUPPLY FAN DATA			SUPPLY AIR DATA							EXHAUST FAN DATA			EXHAUST AIR DATA			ELECTRICAL DATA					
									WINTER				SUMMER						WINTER	SUMMER							
MARK	ROOM NAME	ROOM NO	LOCATION SERVED	MANUFACTURER	MODEL	CFM	HP	AIR PD (IN WG)	EAT (°F)	LAT (°F)	TEMP. EFF. (%)	EAT DB (°F)	LAT DB (°F)	TEMP. EFF. (%)	CFM	HP	AIR PD (IN WG)	EAT (°F)	EAT DB (°F)	VOLTS	PHASE	FLA	MCA	MOCP	NOTES
ERV-A1	STORAGE	A214	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL
ERV-B1	LAUNDRY	B214	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL
ERV-C1	LAUNDRY	C213	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL
ERV-D1	LAUNDRY	D26	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL
ERV-E1	CORRIDOR	E20	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL
ERV-F1	CORRIDOR	F20	CORRIDOR	RENEWAIRE	EV PREMIUM L	250	85W	0.60	-12	70	66	90	75	51	165	85W	0.50	75	75	120	1	2.44	10	10	ALL

BOILER - GAS FIRED SCHEDULE

NOTES:
1. BOILER TO BE CONTROLLED BY INTEGRAL TRIANGLE TUBE CTRLMAX BOILER MANAGEMENT SYSTEM. BOILER DISCHARGE TEMPERATURE SHALL NOT EXCEED 140F.
2. PROVIDE WITH CONDENSATE NEUTRALIZATION KITS.
3. CAPACITY RATED ON 0% GLYCOL.
4. STAINLESS STEEL FIRE TUBE HEAT EXHANGER.
5. MECHANICAL ROOM WITH BOILERS SHALL HAVE PUSH BUTTON FOR EMERGENCY SHUTDOWN.
6. EXISTING TO REMAIN.

	LOCATION				WATER DATA			HEATER DATA				RELIEF VALVE SETTING (PSI)	VENTING		ELECTRICAL DATA						
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL	FLOW RATE (GPM)	WATER PD (FT)	ENT (°F)	LWT (°F)	CONN (IN)	INPUT (MBH)	OUTPUT (MBH)	TURN DOWN	THERMAL EFF. (%)	WATER VOLUME (GAL)		VENT (IN)	AIR (IN)	MATERIAL	VOLTS	PHASE	FLA	MCA	MOCP	WEIGHT (LBS)	NOTES
B-A1	MECH. / ELECT.	A113	TRIANGLE TUBE	PRESTIGE SOLO 299	MODULATING	4	40	140	1-1/4	72.5-299	68.8-284	4.1:1	95	7.4	30	4	4	CPVC	120	1	10	12.5	15	225	1,2,3,4,5
B-A2	MECH. / ELECT.	A113	TRIANGLE TUBE	PRESTIGE SOLO 299	MODULATING	4	40	140	1-1/4	72.5-299	68.8-284	4.1:1	95	7.4	30	4	4	CPVC	120	1	10	12.5	15	225	1,2,3,4,5
B-B1	MECH / ELEC.	B114	TRIANGLE TUBE	PRESTIGE SOLO 299	MODULATING	4	40	140	1-1/4	72.5-299	68.8-284	4.1:1	95	7.4	30	4	4	CPVC	120	1	10	12.5	15	225	1,2,3,4,5
B-B2	MECH / ELEC.	B114	TRIANGLE TUBE	PRESTIGE SOLO 299	MODULATING	4	40	140	1-1/4	72.5-299	68.8-284	4.1:1	95	7.4	30	4	4	CPVC	120	1	10	12.5	15	225	1,2,3,4,5
B-C[E]	MECH / ELEC.	C113	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	220	6
B-C[E]	MECH / ELEC.	C113	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	220	6
B-D1	MECH.	D18	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	220	1,2,3,4,5
B-D2	MECH.	D18	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	220	1,2,3,4,5
B-E1	MECH / ELEC.	E17	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	220	1,2,3,4,5
B-F1	MECH / ELEC.	F17	TRIANGLE TUBE	PRESTIGE SOLO 250	MODULATING	4	40	140	1-1/4	43.6-240	41.4-228	5.5:1	95	4.5	30	3	3	CPVC	120	1	10	12.5	15	229	1,2,3,4,5

SELF CONTAINED COOLING UNIT (DX) SCHEDULE

NOTES:
1. CONTRACTOR TO VERIFY QTY.

MARK	UNIT TYPE SERVED
AC-1	TYPE A, TYPE D
AC-2	TYPE B, TYPE C
AC-3	TYPE E, TYPE F
AC-4	TYPE D, TYPE E, TYPE F

SELF CONTAINED COOLING UNIT (DX) SCHEDULE

NOTES:
1. WASHABLE FILTERS.
2. ON/OFF TIMER.
3. ENERGY STAR RATED.
4. PROVIDE WITH GE ROOM AIR CONDITIONER QUICK SNAP WALL SLEEVE.

	LOCATION				SUPPLY FAN DATA		COOLING DATA				FILTER DATA		ELECTRICAL DATA						
MARK	ROOM NAME	ROOM NO	MANUFACTURER	MODEL	AIRFLOW (CFM)	ESP (IN WG)	OD (°F)	WB (°F)	TOTAL CAP. (MBH)	EFF. (EER)	QTY.	SIZE	VOLTS	PHASE	FLA	MCA	MOCP	WEIGHT (LBS)	NOTES
AC-1	<varies>	<varies>	GE	AHEK12AC	250	0.1	80	67	12	11.4	1	WJ85X24065	120	1	9.4	11.75	20	66	1,2,3
AC-2	<varies>	<varies>	GE	AHEK14AC	280	0.1	80	67	14	11.3	1	WJ85X24065	120	1	11.2	14	20	72	1,2,3
AC-3	<varies>	<varies>	GE	AHEK18AC	235	0.1	80	67	10	11.4	1	WJ85X24065	120	1	7.8	9.75	20	58	1,2,3
AC-4	<varies>	<varies>	GE	AJCQ12ARH	250	0.1	80	67	12	10.5	1	WJ85X24065	120	1	10.3	12.9	20	82	1,2,3,4

DIFFUSER, REGISTER, & GRILLE SCHEDULE

NOTES:
1. CONTRACTOR IS RESPONSIBLE TO VERIFY LOCATIONS, INSTALLATION METHODS, AND QUANTITIES PRIOR TO ORDERING MATERIALS.
2. VERIFY FRAME TYPE: PLASTER OR LAY-IN FRAME.
3. COLOR SELECTION BY ARCHITECT FROM STANDARD COLOR CHART.

MARK	MANUFACTURER	MODEL	LOCATION	AIR	TYPE	FEATURES	DAMPER	MAX STATIC P.D. (IN WG)	MATERIAL	FINISH	NOTES
S1	TITUS	OMNI	SURFACE	SUPPLY	DIFFUSER	12"x12", NECK SIZE ON PLAN	Y	0.1	STEEL	SEE NOTE 3	1,2
R1	TITUS	350RL	SURFACE	RETURN	GRILLE	SIZE ON PLAN	N	0.1	STEEL	SEE NOTE 3	1,2

FAN SCHEDULE

NOTES:
1. ENERGY STAR RATED.
2. EXHAUST HOOD TO BE MOUNTED 18 TO 24 INCHES ABOVE COOKTOP.
3. HIGH SPEED BY HUMIDISTAT WHEN RH EXCEEDS 50%.
4. PROVIDE WITH OPTIONAL MULTI-SPEED CONTROLS FOR ASHRAE 62.2 COMPLIANCE.

	LOCATION					FAN DATA			MOTOR DATA			ELECTRICAL DATA						
MARK	ROOM NAME	ROOM NO	SERVES	MANUFACTURER	MODEL	CFM	ESP (IN WG)	RPM	DRIVE TYPE	HP	CONTROL	VOLTS	PHASE	FLA	MOCP	WEIGHT (LBS)	NOTES
EF-B1	CRAWL SPACE	B	CRAWL SPACE	PANASONIC	FV-08VWG1	70	0.03	660	DIRECT	18W	CONTINUOUS	120	1	0.2	15	3.1	1
EF-C1	CRAWL SPACE	C	CRAWL SPACE	PANASONIC	FV-08VWG1	70	0.03	660	DIRECT	18W	CONTINUOUS	120	1	0.2	15	3.1	1
EF-G1	SERV. KITCHEN	G03	SERVING KITCHEN	BROAN	BCSEX130	180	0.15	660	DIRECT	78W	SWITCH	120	1	0.65	15	17.2	2
EF-K	<varies>	<varies>	UNIT KITCHEN	BROAN	BCSEX130	180	0.15	---	DIRECT	78W	SWITCH	120	1	0.65	15	17.2	2
EF-T	<varies>	<varies>	UNIT BATHROOM	PANASONIC	FV-08105VS1	30/80	0.1	---	DIRECT	8.5W	SWITCH	120	1	0.39	15	7.1	1,3,4

BOILER RECIRCULATING PUMP SCHEDULE

NOTES:
1. PUMP WITH EC MOTOR WITH PRE-PROGRAMMED CURVES/OPERATION MODES. PUMP TO BE CONTROLLED BY ASSOCIATED TEKMAN BOILER CONTROLLER.
2. PUMP CAPACITY BASED ON 0% PROPYLENE GLYCOL.
3. REFER TO PIPING SCHEMATIC DETAIL FOR REQUIRED ACCESSORIES.
4. PUMP SHALL BE SET TO OPERATE TO MAINTAIN CONSTANT PRESSURE.

	LOCATION					PUMP TYPE	GPM	PUMP HEAD (FT WG)	MOTOR DATA								
MARK	ROOM NAME	ROOM NO	SERVES	MANUFACTURER	MODEL				HP	VOLTS	PHASE	FLA	MCA	MOCP	RPM	VFD	NOTES
BP-A1	MECH. / ELECT.	A113	B-A1	GRUNDFOS	MAGNA1 40-80 GF	INLINE	45	30	0.5	120	1	4.2	5.26	20	3599	No	ALL
BP-A2	MECH. / ELECT.	A113	B-A2	GRUNDFOS	MAGNA1 40-80 GF	INLINE	45	30	0.5	120	1	4.2	5.26	20	3599	No	ALL
BP-B1	MECH. / ELEC.	B114	B-B1	GRUNDFOS	MAGNA1 40-80 GF	INLINE	45	30	0.5	120	1	4.2	5.26	20	3599	No	ALL
BP-B2	MECH. / ELEC.	B114	B-B2	GRUNDFOS	MAGNA3 40-80 GF	INLINE	45	30	0.5	120	1	4.2	5.26	20	3599	No	ALL
BP-D1	MECH.	D18	B-D1	GRUNDFOS	MAGNA3 40-80 GF	INLINE	22.5	15	0.4	120	1	2	2.57	20	3257	No	ALL
BP-D2	MECH.	D18	B-D2	GRUNDFOS	MAGNA3 40-80 GF	INLINE	22.5	15	0.4	120	1	2	2.57	20	3257	No	ALL
BP-E1	MECH / ELEC.	E17	B-E1	GRUNDFOS	MAGNA3 40-180 GF	INLINE	15	11	0.4	120	1	2	2.57	20	2758	No	ALL
BP-F1	MECH / ELEC.	F17	B-F1	GRUNDFOS	MAGNA3 40-180 GF	INLINE	15	11	0.4	120	1	2	2.57	20	2758	No	ALL

PLUMBING FIXTURE SCHEDULE

NOTES:
1. CHROME ESCUTCHEONS AT ALL EXPOSED WALL PENETRATIONS.
2. SEAL JOINTS BETWEEN FIXTURES AND WALLS, FLOORS AND COUNTERS USING SANITARY-TYPE, ONE-PART MILDEW RESISTANT SILICONE SEALANT. SEALANT COLOR TO MATCH FIXTURE COLOR.
3. ADA COMPLIANT.
4. WATERSENSE CERTIFIED.
5. PROVIDE WITH 1.5 GPM FLOW RESTRICTOR. PROVIDE WITH AQUATIC 2603SMT TUB-SHOWER. (PROVIDE ZURN Z7000-H9/9 AND AQUATIC 2603SMTE WITH GRAB BARS FOR TYPE A1 & TYPE B1 UNIVERSAL DESIGN UNITS.)
6. PROVIDE WITH ELKAY CR3322 EQUAL DOUBLE BOWL DROP-IN STAINLESS STEEL SINK. (PROVIDE ELKAY GECR3321 FOR TYPE A1 & B1 UNIVERSAL DESIGN UNITS.)
7. PROVIDE WITH K-2210-0 ELONGATED TOILET SEAT, TOILET BOWL HEIGHT IS 17" AFF.

				LOCAL CONNECTION SIZES (INCHES)						
MARK	FIXTURE	MANUFACTURER	MODEL	WASTE	VENT	CW	HW	MOUNTING HEIGHT	FINISH	NOTES
B1-1	BATHTUB	DELTA	T13420-HDOT	1-1/2"	1-1/2"	1/2"	1/2"	FLOOR	CHROME	1,2,3,4,5
HY-1	HYDRANT - WALL (FREEZE PROOF)	WOODFORD	68	---	---	3/4"	---	24" AFF	STAINLESS STEEL	---
KS-1	SINK	DELTA	1953LF	(2) 1-1/2"	1-1/2"	1/2"	1/2"	COUNTER	CHROME	1,2,3,4,6
L-1	LAVATORY	DELTA COMMERCIAL	500-HDMCDST	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER	CHROME	1,2,3,4
WC-1	WATER CLOSET, FLOOR-MOUNTED, FLUSH-TANK	KOHLER	K-31424	3"	2"	1/2"	---	14" AFF	WHITE	1,2,3,4,7
YH-1	HYDRANT - YARD	WOODFORD	Y34	---	---	3/4"	---	GRADE	GALVANIZED STEEL	---

VAN METER WILLIAMS POLLACK LLP
ARCHITECTURE | URBAN DESIGN | SAN FRANCISCO | BOSTON | MINNEAPOLIS
222 Second Street, Suite 300 San Francisco, CA 94105 T 415.551.5252

CIVIL ENGINEER
BKBM Engineers
6120 Earle Brown Drive, Suite 700
Minneapolis, MN 55430

LANDSCAPE ARCHITECT
Confluence
901 N. 3rd St, Suite 225
Minneapolis, MN 55401

MEP ENGINEER
Emanuelson-Podas, Inc.
7705 Bush Lake Road
Edina, MN 55439

STRUCTURAL ENGINEER
Mattson Macdonald Young
105 South 5th Avenue, Suite 100
Minneapolis, MN 55401

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: John Henderson

JOHN HENDERSON
Typed or Printed Name

58756 — License #

06/13/2024 — Date

REVISION

ID	DATE	NAME

Project:

Maple Hills Apartment Renovation

521 Maple Street
Red Wing, MN 55066

Client:

CommonBond Communities

1060 Montreal Avenue
St. Paul, MN 55116

MECHANICAL SCHEDULES

ISSUE: PERMIT / BID SET
DATE: 06/13/2024
JOB #: 4954.0000
SCALE: 1" = 1'-0"

M7.10

6/13/2024 4:19:08 AM