

GENERAL SYMBOLS

A

AB

PLAN TITLES

SCALE: 1/8" = 1'-0"

04'8'16'

NORTH ARROW

PLUMBING PIPING SYMBOLS

	BALL VALVE
	ELBOW DOWN
	TEE DOWN
	ELBOW UP \ TEE UP
	VENT TRHU ROOF
	FLOOR DRAIN
	FLOOR CLEANOUT
	DOMESTIC HOT WATER
	DOMESTIC COLD WATER
	SANITARY
	SANITARY BELOW FLOOR
	VENT PIPING

PLUMBING NOTES

1. NOTES BELOW ARE NOT INTENDED TO REPLACE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO NOTES.
2. PLUMBING DRAWINGS DO NOT NECESSARILY SHOW ALL RELATED WORK; CONTRACTOR TO USE ALL DRAWINGS IN CONTRACT DOCUMENTS FOR DIVISION 15 - PLUMBING WORK.
3. COORDINATE WORK WITH OTHER DIVISIONS AND SPECIFICATIONS.
4. UNLESS OTHERWISE INDICATED, PROVIDE A COMPLETE AND OPERATIONAL PLUMBING SYSTEM INCLUDING ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT.
5. PLUMBING PLANS, DETAILS AND ONE-LINE DIAGRAMS SHOW THE GENERAL LOCATION AND ARRANGEMENT OF THE SYSTEM. THESE ARE DIAGRAMMATIC AND DO NOT SHOW ALL BENDS, COUPLINGS, OFFSETS, VALVES, DRAINS, FITTINGS, HANGERS, CLEANOUTS AND ACCESS DOORS WHICH THE CONTRACTOR MUST PROVIDE TO COMPLETE THE SYSTEM.
6. PLANS AND DETAILS DO NOT SHOW ALL INTERFERENCE'S AND CONDITIONS, VISIBLE AND/OR HIDDEN, THAT MAY EXIST; THUS, REQUIRING THE CONTRACTOR TO INSPECT AND SURVEY THE SPACE BEFORE PERFORMING THE WORK.
7. BEFORE SELECTING MATERIAL AND EQUIPMENT AND PROCEEDING WITH WORK, INSPECT AREAS WHERE MATERIAL AND EQUIPMENT ARE TO BE INSTALLED TO INSURE SUITABILITY AND CHECK NEEDED SPACE FOR PLACEMENT AND CLEARANCES.
8. BEFORE CUTTING OR DRILLING INTO BUILDING ELEMENTS, INSPECT AND LAYOUT WORK TO AVOID DAMAGING STRUCTURAL ELEMENTS AND BUILDING UTILITIES.
9. LOCATE ALL EQUIPMENT, WHICH REQUIRES SERVICING IN FULLY ACCESSIBLE POSITIONS. IF REQUIRED FOR BETTER ACCESSIBILITY, FURNISH ACCESS DOORS FOR THAT PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY. ANY CHANGE SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.
10. THE TERM "INTERIOR" IS AN INTERIOR LOCATION WHERE ITS ENVIRONMENT IS HEATED AND/OR AIR CONDITIONED AND NOT SUBJECT TO OUTSIDE WEATHER CONDITIONS.
11. THE TERM "EXTERIOR" IS ALL LOCATIONS, WHICH ARE NOT INTERIOR, OR UNDERGROUND.
12. THE TERM "INTERIOR FINISHED SPACE" IS INTERIOR SPACES, WHICH ARE USED FOR OFFICES, CORRIDORS, LOBBIES, TOILETS, STORAGE AND FILING ROOMS, LOUNGES, MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC. ALL WORK IN INTERIOR FINISHED SPACES ARE TO BE CONCEALED BEHIND WALLS, ABOVE CEILINGS OR HUNG CEILINGS, OR UNDER THE FLOOR. PROVIDE ALL NECESSARY CUTTING, PATCHING, REPAINTING AND/OR REPLACEMENT OF CEILING TILES AS REQUIRED TO PERFORM WORK.
13. ALL PIPING AND CONDUITS PASSING THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS SHALL BE PROVIDED WITH A U.L. LISTED FIRE RATED MATERIAL AND/OR ASSEMBLY EQUAL TO THE RATING OF THE WALL, CEILING OR FLOOR.
14. IF AN EQUIPMENT MANUFACTURER REQUIRES LARGER CAPACITY, CIRCUITRY AND/OR EQUIPMENT; THE CONTRACTOR SHALL PROVIDE SUCH CAPACITY AND/OR EQUIPMENT UNDER HIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
15. IF AN EQUIPMENT MANUFACTURER RECOMMENDS AN ACCESSORY(S) OR AN OPTION(S) FOR THE SUPPLIED EQUIPMENT; THE CONTRACTOR SHALL PROVIDE ACCESSORY(S) OR OPTION(S) UNDER HIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER.
16. ASCERTAIN FROM EXAMINATION OF THE DRAWINGS, ANY SPECIAL TEMPORARY OPENINGS IN THE BUILDING REQUIRED FOR THE ADMISSION OF APPARATUS PROVIDED UNDER THIS DIVISION. NOTIFY THE CONTRACTOR WITH SUFFICIENT NOTICE TO PROVIDE THESE OPENINGS. IN THE EVENT OF FAILURE TO GIVE SUFFICIENT NOTICE, THE CONTRACTOR SHALL ASSUME ALL COSTS OF PROVIDING SUCH OPENINGS THEREAFTER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISASSEMBLY AND ASSEMBLY OF EQUIPMENT AS REQUIRED TO PLACE EQUIPMENT IN ITS FINAL LOCATION.

PLUMBING SPECIFICATIONS

1. GENERAL
- 1.1 SUMMARY: THIS SECTION INCLUDES MATERIAL REQUIREMENTS AND INSTALLATION REQUIREMENTS FOR PLUMBING SYSTEMS. THE FOLLOWING ITEMS ARE INCLUDED IN THIS SECTION: DOMESTIC WATER DISTRIBUTION SYSTEMS, DRAINAGE AND VENT SYSTEMS, PLUMBING FIXTURES AND EQUIPMENT, SUPPORTS AND ANCHORS, PLUMBING SYSTEM INSULATION AND JOINT SEALERS.
- 1.2 REGULATORY REQUIREMENTS: COMPLY WITH THE PROVISIONS OF THE FOLLOWING: 2003 INTERNATIONAL MECHANICAL CODE, 2003 INTERNATIONAL PLUMBING CODE, CONNECTICUT BUILDING CODE, CONNECTICUT LIFE SAFETY CODE AND NFPA NATIONAL ELECTRIC CODE.
2. PRODUCTS
- 2.1 DOMESTIC WATER DISTRIBUTION SYSTEMS
- A. PIPE, TUBE AND FITTINGS: REFER TO PART 3 FOR IDENTIFICATION OF SYSTEMS WHERE THE BELOW MATERIALS ARE USED.
1. COPPER TUBE: ASTM B 88, TYPE L WATER TUBE, DRAWN TEMPER.
2. COPPER TUBE: ASTM B 88, TYPE K WATER TUBE, ANNEALED TEMPER.
3. WROUGHT COPPER SOLDER-JOINT FITTINGS: ANSI B16.22, STREAMLINED PATTERN.
4. BRONZE FLANGES: ANSI B16.24, CLASS 150, RAISED GROUND FACE, BOLT HOLES SPOT FACED.
5. UNIONS: ASME B16.39, MALLEABLE IRON, CLASS 150, HEXAGONAL STOCK, WITH BALL-AND-SOCKET JOINTS, METAL-TO-METAL BRONZE SEATING SURFACES, FEMALE THREADED ENDS. THREADS SHALL CONFORM TO ASME B1.20.1.
6. SOLDER FILLER METAL: ASTM B 32, 95-5 TIN-ANTIMONY.
- B. VALVES AND SPECIALTIES:
1. COMBINED PRESSURE-TEMPERATURE RELIEF VALVES: BRONZE BODY, TEST LEVER, THERMOSTAT, COMPLYING WITH ANSI Z21.22 LISTING REQUIREMENTS FOR TEMPERATURE DISCHARGE CAPACITY. TEMPERATURE RELIEF VALVES SHALL BE FACTORY SET AT 210 DEG F, AND PRESSURE RELIEF AT 150 PSI.
2. WATER METER: DISC TYPE CONFORMING TO AWWA C700. PROVIDE WATER METERS WITH REGISTRATION IN GALLONS. PROVIDE WITH REMOTE REGISTRATION SYSTEM PER UTILITY COMPANY STANDARDS.
3. BALL VALVES, 1 INCH AND SMALLER: RATED FOR 150 PSI SATURATED STEAM PRESSURE, 400 PSI WOG PRESSURE; TWO-PIECE CONSTRUCTION; WITH BRONZE BODY CONFORMING TO ASTM B 62, STANDARD (OR REGULAR) PORT, CHROME-PLATED BRASS BALL, REPLACEABLE "TEFLON" OR "TFE" SEATS AND SEALS, BLOWOUT-PROOF STEM, AND VINYL-COVERED STEEL HANDLE.
- 2.2 SANITARY DRAINAGE AND VENT SYSTEMS
- A. ABOVE GROUND SANITARY DRAINAGE AND VENT PIPE AND FITTINGS: PVC, TYPE DWV PIPE AND FITTINGS: ASTM D2685 PIPE AND FITTINGS, WITH SOLVENT CEMENTED JOINTS; DWV PLASTIC FITTING PATTERNS SHALL CONFORM TO ASTM D3311. SOLVENT: ASTM D2564.
- B. UNDERGROUND BUILDING DRAIN PIPE AND FITTINGS: PVC SEWER PIPE AND FITTINGS: CONFORM TO ASTM D2729 FOR PIPE AND FITTINGS. SOLVENT: ASTM D2564.
- 2.3 PLUMBING FIXTURES AND EQUIPMENT: PLUMBING FIXTURES AND EQUIPMENT: PROVIDE PLUMBING FIXTURES AND TRIM, FITTINGS, OTHER COMPONENTS, AND SUPPORTS AS INDICATED ON THE CONTRACT DRAWINGS.
- 2.4 SUPPORTS AND ANCHORS: HANGERS AND SUPPORT COMPONENTS SHALL BE FACTORY FABRICATED OF MATERIALS, DESIGN, AND MANUFACTURER COMPLYING WITH MSS SP-58. COMPONENTS SHALL HAVE GALVANIZED COATINGS WHERE INSTALLED FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE FIELD-APPLIED FINISH. PIPE ATTACHMENTS SHALL HAVE NONMETALLIC COATING FOR ELECTROLYTIC PROTECTION WHERE ATTACHMENTS ARE IN DIRECT CONTACT WITH COPPER TUBING.
- 2.5 PLUMBING SYSTEM INSULATION
- A. INSULATION GENERAL: CONFORM TO THE FOLLOWING CHARACTERISTICS FOR INSULATION INCLUDING FACINGS, CEMENTS, AND ADHESIVES: WHEN TESTED ACCORDING TO ASTM E 84, BY UL OR OTHER TESTING OR INSPECTING ORGANIZATION ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. LABEL INSULATION WITH APPROPRIATE MARKINGS OF TESTING LABORATORY. INTERIOR INSULATION: FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. EXTERIOR INSULATION: FLAME SPREAD RATING OF 75 OR LESS AND A SMOKE DEVELOPED RATING OF 150 OR LESS.
- B. PREFORMED GLASS FIBER PIPE INSULATION: ASTM C 547, CLASS 1, RIGID PIPE INSULATION, JACKETED. INORGANIC GLASS FIBERS, BONDED WITH A THERMOSETTING RESIN. JACKET: ALL-PURPOSE, FACTORY-APPLIED, LAMINATED GLASS-FIBER-REINFORCED, FLAME-RETARDANT KRAFT PAPER AND ALUMINUM FOIL HAVING SELF-SEALING LAP. PVC FITTING COVERS: FACTORY-FABRICATED FITTING COVERS MANUFACTURED FROM 20-MIL-THICK, HIGH-IMPACT, ULTRA-VIOLET-RESISTANT PVC.
- 2.6 JOINT SEALERS: JOINT SEALER PRODUCTS SHALL BE TESTED IN ACCORDANCE WITH ASTM E-119, ASTM E-814 AND ASTM E-84. ALL PRODUCTS SHALL NOT CONTAIN ASBESTOS OR PCB'S. ALL JOINT SEALERS SHALL BE INSTALLED IN U.L. LISTED CONFIGURATIONS.
3. EXECUTION
- 3.1 INSTALLATION OF DOMESTIC WATER DISTRIBUTION SYSTEMS
- A. INSTALL TYPE L, DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND SOLDER JOINTS FOR PIPE ABOVE GROUND, WITHIN BUILDING. INSTALL TYPE K, ANNEALED TEMPER COPPER TUBE FOR PIPE, WITH MINIMUM NUMBER OF JOINTS, BELOW GROUND.
- B. FIRE BARRIER PENETRATIONS: WHERE PIPES PASS THROUGH FIRE-RATED WALLS, PARTITIONS, CEILINGS, AND FLOORS, MAINTAIN THE FIRE-RATED INTEGRITY.
- C. TEST WATER DISTRIBUTION PIPING AS FOLLOWS: TEST FOR LEAKS AND DEFECTS ALL NEW WATER DISTRIBUTION PIPING SYSTEMS AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED OR REPAIRED. IF TESTING IS PERFORMED IN SEGMENTS, SUBMIT A SEPARATE REPORT FOR EACH TEST, COMPLETE WITH A DIAGRAM OF THE PORTION OF THE SYSTEM TESTED.
- D. REPAIR ALL LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST SYSTEM OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- E. CLEAN AND DISINFECT WATER DISTRIBUTION PIPING AS FOLLOWS: PURGE ALL NEW WATER DISTRIBUTION PIPING SYSTEMS AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, OR REPAIRED PRIOR TO USE. USE THE PURGING AND DISINFECTING PROCEDURE PROSCRIBED BY THE AUTHORITY HAVING JURISDICTION OR, IN CASE A METHOD IS NOT PRESCRIBED BY THAT AUTHORITY, THE PROCEDURE DESCRIBED IN EITHER AWWA C651, OR AWWA C652.
- 3.2 INSTALLATION OF SANITARY DRAINAGE AND VENT SYSTEMS
- A. PREPARATION FOUNDATION FOR UNDERGROUND BUILDING DRAINS: GRADE, TRENCH BOTTOMS TO PROVIDE A SMOOTH, FIRM, AND STABLE FOUNDATION, FREE FROM ROCK, THROUGHOUT THE LENGTH OF THE PIPE. REMOVE UNSTABLE, SOFT, AND UNSUITABLE MATERIALS AT THE SURFACE UPON WHICH PIPES ARE TO BE LAID AND BACKFILL WITH CLEAN SAND OR PEA GRAVEL TO INDICATED INVERT ELEVATION. SHAPE BOTTOM OF TRENCH TO FIT BOTTOM OF PIPE FOR 90-DEGREES (BOTTOM 1/4 OF THE CIRCUMFERENCE). FILL UNEVENNESS WITH TAMPED SAND BACKFILL. AT EACH PIPE JOINT DIG BELL HOLES TO RELIEVE THE BELL OF THE PIPE OF ALL LOADS, AND TO ENSURE CONTINUOUS BEARING OF THE PIPE BARREL ON THE FOUNDATION.
- B. PIPE APPLICATIONS - ABOVE GROUND, WITHIN BUILDING: INSTALL PVC TYPE DWV PLASTIC PIPE AND FITTINGS.
- C. PIPE APPLICATIONS - BELOW GROUND, WITHIN BUILDING: INSTALL PVC SEWER PIPE AND FITTINGS WITH SOLVENT CEMENTED JOINTS.
- D. PIPE AND TUBE JOINT CONSTRUCTION: PVC DWV PIPE: JOINING AND INSTALLATION OF PVC DRAINAGE PIPE AND FITTINGS SHALL CONFORM TO ASTM D2685.
- E. FIRE BARRIER PENETRATIONS: WHERE PIPES PASS THROUGH FIRE RATED WALLS, PARTITIONS, CEILINGS, AND FLOORS, MAINTAIN THE FIRE RATED INTEGRITY.
- F. PIPING SYSTEM TEST: TEST DRAINAGE AND VENT SYSTEM IN ACCORDANCE WITH THE PROCEDURES OF THE AUTHORITY HAVING JURISDICTION. REPAIR ALL LEAKS AND DEFECTS USING NEW MATERIALS AND RETEST SYSTEM OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- G. ADJUSTING AND CLEANING: CLEAN INTERIOR OF PIPING SYSTEM. REMOVE DIRT AND DEBRIS AS WORK PROGRESSES. CLEAN DRAIN STRAINERS, DOMES, AND TRAPS. REMOVE DIRT AND DEBRIS.
- 3.3 INSTALLATION OF HANGERS AND SUPPORTS: INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE; COMPLY WITH MSS SP-69 AND SP-68. ARRANGE FOR GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING SUPPORTED TOGETHER ON FIELD-FABRICATED, HEAVY-DUTY TRAPEZE HANGERS WHERE POSSIBLE. INSTALL SUPPORTS WITH MAXIMUM SPACINGS COMPLYING WITH MSS SP-69. WHERE PIPING OF VARIOUS SIZES IS SUPPORTED TOGETHER BY TRAPEZE HANGERS, SPACE HANGERS FOR SMALLEST PIPE SIZE OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPE AS SPECIFIED ABOVE FOR INDIVIDUAL PIPE HANGERS.
- 3.4 INSTALLATION OF PLUMBING SYSTEM INSULATION
- A. GLASS FIBER PIPE INSULATION INSTALLATION: BOND INSULATION TO PIPE WITH LAGGING ADHESIVE. SEAL EXPOSED ENDS WITH LAGGING ADHESIVE. SEAL SEAMS AND JOINTS WITH VAPOR BARRIER COMPOUND.
- B. PIPING SYSTEMS: UNLESS OTHERWISE INDICATED, INSULATE THE FOLLOWING PIPING SYSTEMS: STORM DRAINAGE, DOMESTIC COLD WATER AND DOMESTIC HOT WATER.
- D. DOMESTIC COLD WATER AND STORM WATER ALL SIZES: 1/2-INCH-THICK GLASS FIBER INSULATION EXCEPT PROVIDE 1" INSULATION FOR PIPING WITH HEAT TRACING.
- E. DOMESTIC HOT WATER AND HOT WATER RETURN ALL SIZES: 3/4-INCH-THICK GLASS FIBER INSULATION, PROVIDE 1-INCH-THICK INSULATION WITHIN 8 FEET OF STORAGE TANK.
- 3.5 JOINT SEALER INSTALLATIONS: VERIFY ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS TO DETERMINE WHERE ALL PIPING PASSES THROUGH FIRE/SMOKE RATED WALLS, CEILINGS, FLOORS OR OTHER BUILDING ELEMENTS THAT REQUIRE PENETRATIONS TO BE SEALED. INSTALL ALL JOINT SEALERS AS SPECIFIED PER THE MANUFACTURER. ALL JOINT SEALING SYSTEMS SHALL BE U.L. RATED AND INSTALLED IN U.L. LISTED CONFIGURATIONS.

SEAL

PROJECT TITLE

MOZZICATO - BANK BUILDING
NEW BRITAIN AVENUE
PLAINVILLE, CT 06062

SHEET TITLE

PLUMBING NOTES, SYMBOLS & SPECIFICATIONS

BARRY CONE'S
Heating, Air Conditioning & Plumbing Contractors

22 MIGEON AVENUE
TORRINGTON, CT 06790
PHONE: (860) 482-2196
FACSIMILE: (860) 496-9568

PROJECT NO.

G99-23

DRAWN BY:

BAB

CHECKED BY:

KWK

SCALE:

AS-NOTED

DATE:

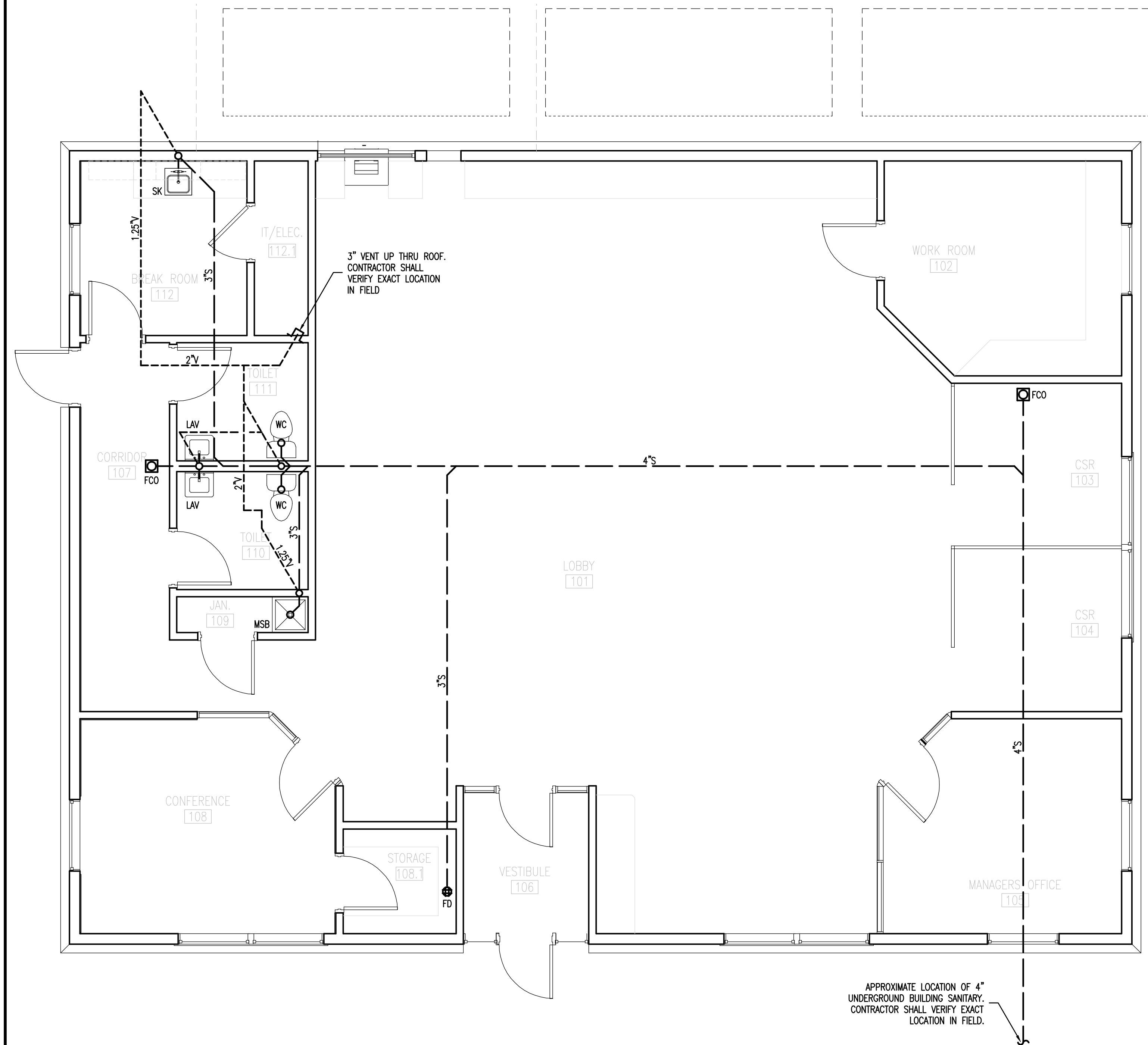
12-21-2009

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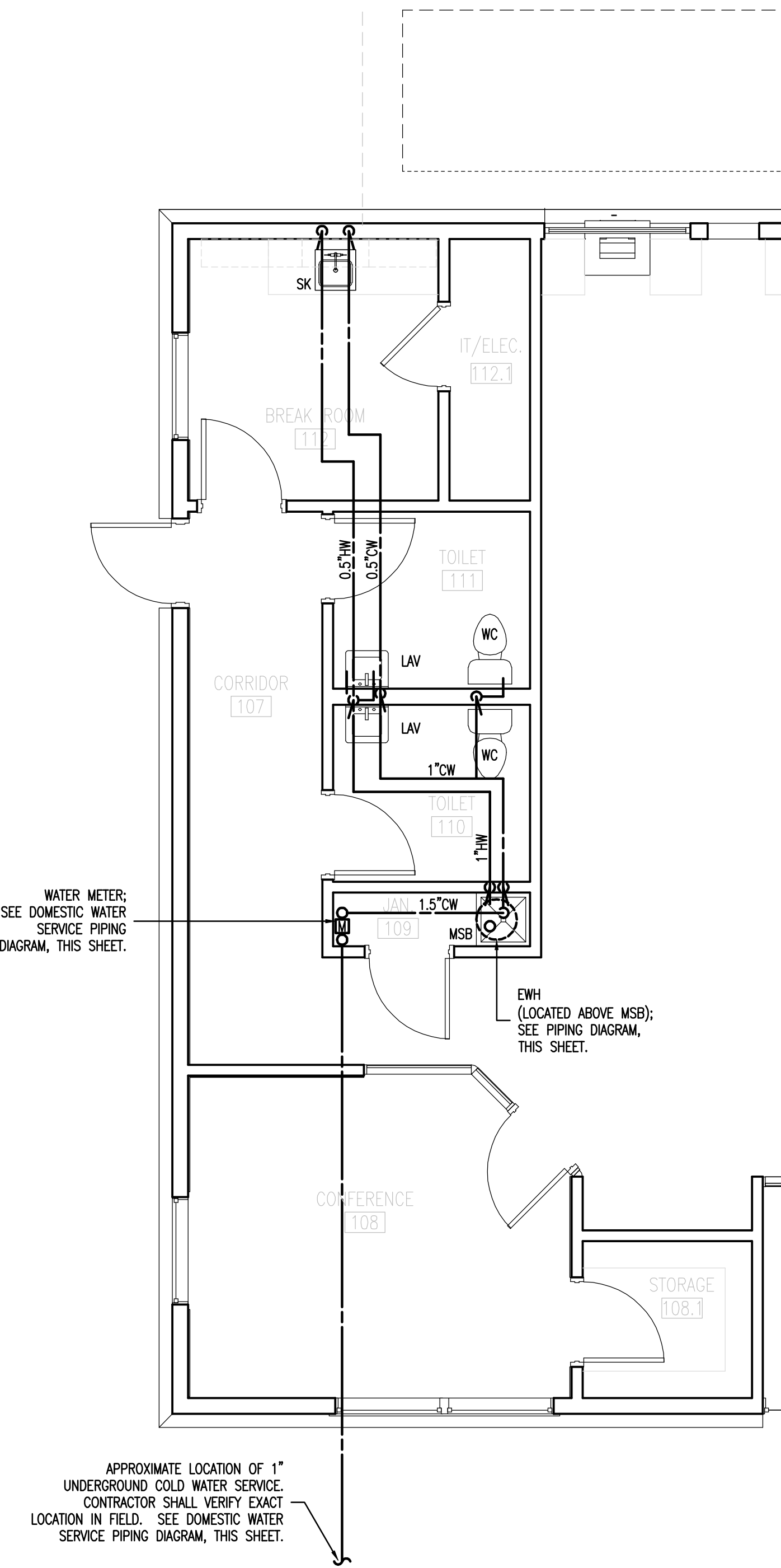
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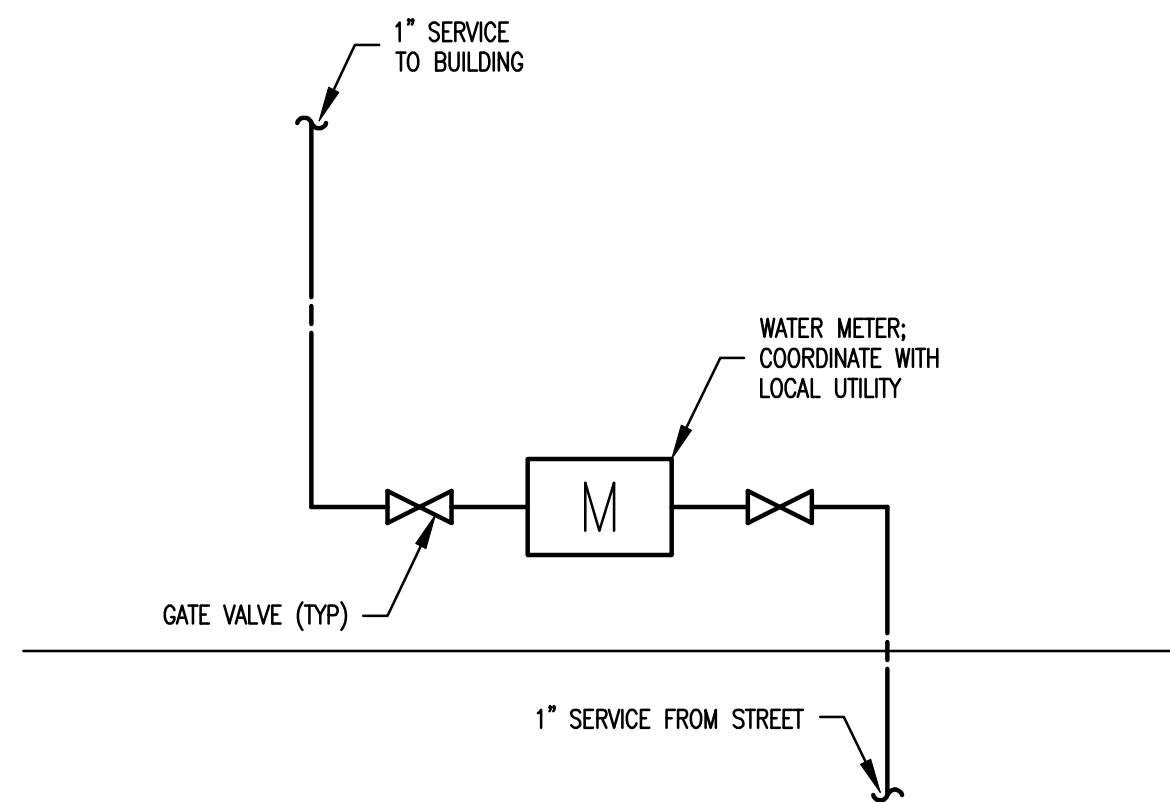
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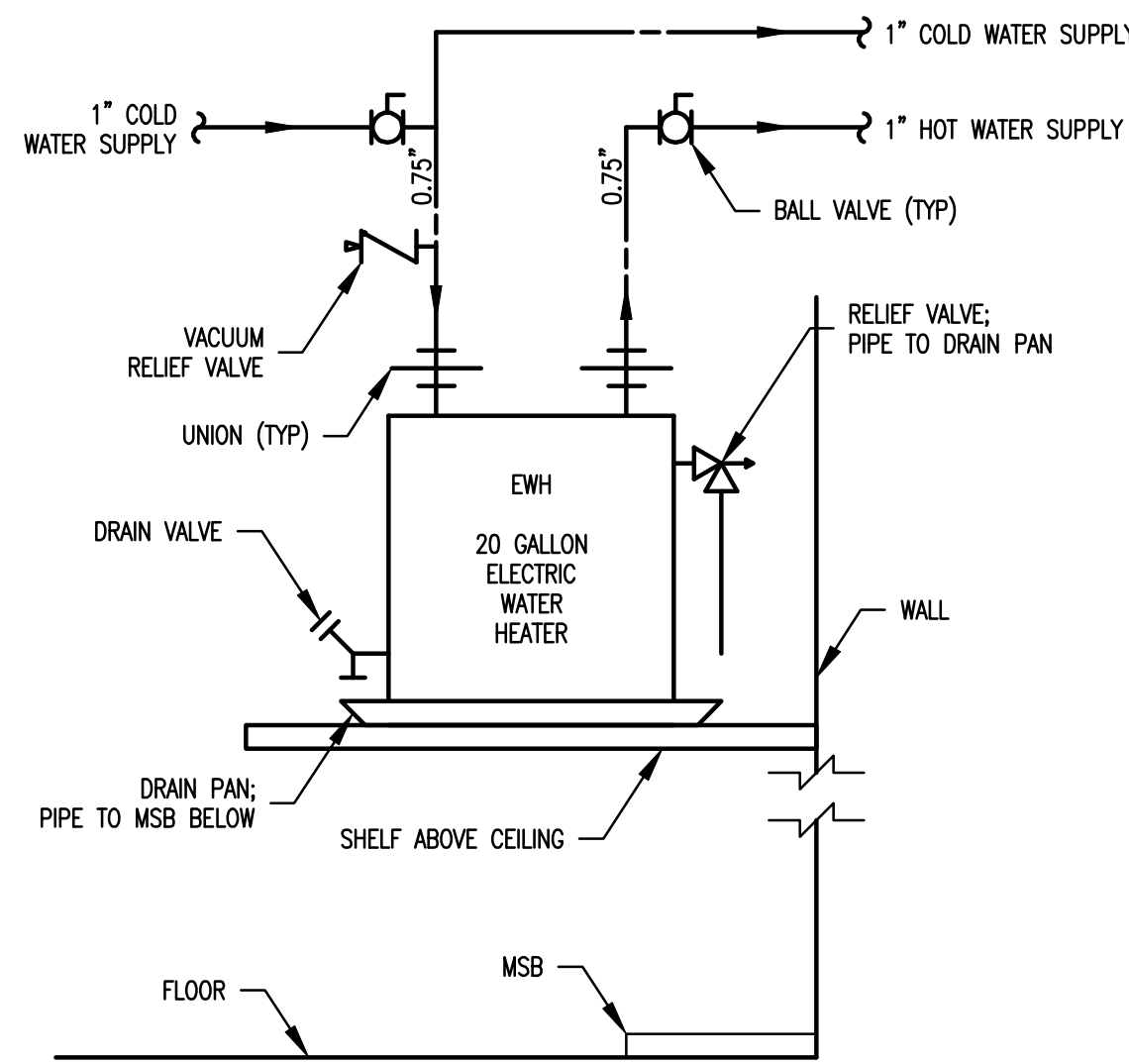
1
P2
SANITARY & VENT FLOOR PLAN
SCALE: 1/4" = 1'-0" 0 2' 4' 8'



2
P2
DOMESTIC WATER PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0" 0 2' 4' 8'



3
P3
DOMESTIC WATER SERVICE PIPING DIAGRAM
NO SCALE



4
P1
EWH PIPING DIAGRAM
NO SCALE

PLUMBING FIXTURE CONNECTIONS AND PIPING SCHEDULE (MINIMUM SIZES)				
FIXTURE TYPE OR PIPING:	WASTE (INCHES), NOTE 1	VENT (INCHES), NOTE 2	HOT WATER (INCHES)	COLD WATER (INCHES)
KITCHEN SINK	1-1/2	1-1/4	1/2	1/2
LAVATORY	1-1/4	1-1/4	1/2	1/2
MOP SERVICE BASIN	2	1-1/4	1/2	1/2
FLOOR DRAIN WITH DEEP SEAL TRAP (2-INCH)	2	1-1/4	N/A	N/A
WATER CLOSET, FLUSH TANK	4	2	N/A	1/2
UNDERFLOOR (CONCRETE/SUBSOIL) VENT PIPING	N/A	2	N/A	N/A
UNDERFLOOR (CONCRETE/SUBSOIL) WASTE PIPING - COMMERCIAL	3	N/A	N/A	N/A
NOTES: 1. MINIMUM SANITARY SIZE AT FIXTURE WHEN SIZE IS NOT SHOWN ON DRAWINGS. 2. MINIMUM VENT SIZE AT FIXTURE WHEN SIZE IS NOT SHOWN ON DRAWINGS.				

PLUMBING FIXTURE AND FITTING SCHEDULE					
FIXTURE	DESCRIPTION	MANUFACTURER	FIXTURE OR EQUIPMENT	FAUCET OR CONTROLS	NOTES, FITTINGS, ACCESSORIES
EWH	ELECTRIC WATER HEATER	LOCHINVAR	20 GALLON ELECTRIC WATER HEATER	N/A	N/A
FCO	FLOOR CLEANOUT	TO BE SELECTED BY CONTRACTOR	TO BE SELECTED BY CONTRACTOR	N/A	UNLESS OTHERWISE NOTED, SIZE TO MATCH PIPE SIZE. ACCESS SHALL BE PROVIDED TO ALL CLEANOUTS.
FD	FLOOR DRAIN	TO BE SELECTED BY CONTRACTOR	TO BE SELECTED BY CONTRACTOR	TO BE SELECTED BY CONTRACTOR	UNLESS OTHERWISE NOTED, SIZE TO MATCH PIPE SIZE.
LAV	WALL HUNG LAVATORY	MANSFIELD	ADA WALL HUNG LAVATORY, MODEL 2018HBN3	PROVIDE WITH SYMMONS FAUCET, MODEL 920-2	MOUNT RIM AT HANDICAP ACCESSIBLE HEIGHT. PROVIDE WITH TRUEBRO ADA INSULATION KIT.
MSB	MOP SERVICE BASIN	FIAT	24 INCH SQUARE FLOOR MOP SINK, MODEL 2424ESS	PROVIDE WITH STERLINE FAUCET, MODEL 830AA	N/A
SK	SINGLE BOWL SINK	ELKAY	SINGLE BOWL STAINLESS STEEL SINK, MODEL P5R2622	PROVIDE SYMMONS FAUCET, LESS SPRAY, MODEL S23-2	N/A
WC	ADA FLOOR-MOUNT, PRESSURE ASSIST WATER CLOSET	MANSFIELD	ADA FLOOR MOUNT, PRESSURE ASSIST WATER CLOSET, MODEL 148-123	PROVIDE WITH KOHLER OPEN FRONT SEAT, LESS LID; MODEL K4670C	MOUNT SO THAT TOP OF SEAT IS 17 TO 19 INCHES FROM FINISHED FLOOR.

SEAL

PROJECT TITLE
MOZZICATO – BANK BUILDING
NEW BRITAIN AVENUE
PLAINVILLE, CT 06062

SHEET TITLE
PLUMBING FLOOR PLANS

PROJECT NO.
G99-23

DRAWN BY:
BAB

CHECKED BY:
KWK

SCALE:
AS-NOTED

DATE:
12-21-2009

FILE NAME:
MBANK-P2.dwg

DRAWING NUMBER
P2

BARRY CONE'S
Heating, Air Conditioning & Plumbing Contractors

22 MIGEON AVENUE
TORRINGTON, CT 06790
PHONE: (860) 482-2196
FACSIMILE: (860) 496-9568

GENERAL SYMBOLS

PLAN TITLES

04'8"

0

4'

8'

16'

SCALE: 1/8" = 1'-0"

NORTH ARROW

MECHANICAL SYMBOLS

12"ø

FLEX DUCT WITH SIZE
(DIMENSIONS IN INCHES)

12"ø

DOUBLE LINE ROUND DUCT
(DIMENSIONS IN INCHES)

24x12

DOUBLE LINE RECTANGULAR DUCT
FIRST NUMBER IS VIEW SIZE,
SECOND NUMBER IS DEPTH SIZE
(DIMENSIONS IN INCHES)

ZD

ZONE DAMPER

90 DEGREE ELBOW

SUPPLY DIFFUSER

RETURN GRILLE

EXHAUST GRILLE

TRANSFER GRILLE

ROUND / OVAL DUCT UP

THERMOSTAT

REFRIGERANT LIQUID PIPING

REFRIGERANT VAPOR PIPING

NATURAL GAS (2PS)

GAS COCK

PIPE ELBOW UP

PIPE ELBOW DOWN

PIPE CAP

MECHANICAL NOTES

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2. MECHANICAL DRAWINGS DO NOT NECESSARILY SHOW ALL RELATED WORK; CONTRACTOR SHALL USE ALL DRAWINGS IN CONTRACT DOCUMENTS FOR DEMOLITION WORK.

3. COORDINATE WORK WITH OTHER DIVISIONS AND SPECIFICATIONS.

4. UNLESS OTHERWISE INDICATED, PROVIDE COMPLETE AND OPERATIONAL MECHANICAL SYSTEMS INCLUDING ALL NECESSARY MATERIAL, LABOR AND EQUIPMENT.

5. MECHANICAL PLANS, DETAILS AND ONE-LINE DIAGRAMS SHOW THE GENERAL LOCATION AND ARRANGEMENTS OF THE MECHANICAL SYSTEMS. THESE ARE DIAGRAMMATIC AND DO NOT SHOW ALL BENDS, COUPLINGS, OFFSETS, VALVES, DRAINS, FITTINGS, HANGERS, CLEANOUTS AND ACCESS DOORS WHICH THE CONTRACTOR MUST PROVIDE TO COMPLETE THE SYSTEM.

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12. THE TERM "INTERIOR FINISHED SPACE" IS INTERIOR SPACES, WHICH ARE USED FOR OFFICES, CORRIDORS, LOBBIES, TOILETS, STORAGE AND FILING ROOMS, LOUNGES, MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC. ALL WORK IN INTERIOR FINISHED SPACES ARE TO BE CONCEALED BEHIND WALLS, ABOVE CEILINGS OR HUNG CEILINGS, OR UNDER THE FLOOR. PROVIDE ALL NECESSARY CUTTING, PATCHING, REPAIRING AND/OR REPLACEMENT OF CEILING TILES AS REQUIRED TO PERFORM WORK.

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16. ASCERTAIN FROM EXAMINATION OF THE DRAWINGS, ANY SPECIAL TEMPORARY OPENINGS IN THE BUILDING REQUIRED FOR THE ADMISSION OF APPARATUS PROVIDED UNDER THIS DIVISION. NOTIFY THE CONTRACTOR WITH SUFFICIENT NOTICE TO PROVIDE THESE OPENINGS. IN THE EVENT OF FAILURE TO GIVE SUFFICIENT NOTICE, THE CONTRACTOR SHALL ASSUME ALL COSTS OF PROVIDING SUCH OPENINGS THEREAFTER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISASSEMBLY AND ASSEMBLY OF EQUIPMENT AS REQUIRED TO PLACE EQUIPMENT IN ITS FINAL LOCATION.

MECHANICAL SPECIFICATIONS

1. GENERAL

1.1 SUMMARY: THIS SECTION INCLUDES GENERAL ADMINISTRATIVE, PROCEDURAL REQUIREMENTS, MATERIAL REQUIREMENTS AND INSTALLATION REQUIREMENTS FOR MECHANICAL HVAC AIR SYSTEMS. THE FOLLOWING ITEMS ARE INCLUDED IN THIS SECTION: CUTTING AND PATCHING, HVAC EQUIPMENT, DUCTWORK, DUCTWORK ACCESSORIES, NATURAL GAS SYSTEMS, SUPPORTS AND ANCHORS, MECHANICAL SYSTEM INSULATION AND TESTING, ADJUSTING AND BALANCING.

1.2 REGULATORY REQUIREMENTS: COMPLY WITH THE PROVISIONS OF THE FOLLOWING: 2003 INTERNATIONAL MECHANICAL CODE, 2003 INTERNATIONAL PLUMBING CODE, CONNECTICUT BUILDING CODE AND CONNECTICUT LIFE SAFETY CODE.

2. PRODUCTS

2.1 HVAC EQUIPMENT: PROVIDE HVAC EQUIPMENT AND COMPONENTS AS INDICATED ON CONTRACT DRAWINGS. THE CONTRACTOR MAY SUBSTITUTE EQUIPMENT OF ANOTHER MANUFACTURER IF IT IS OF EQUAL QUALITY AND RATING, SUBJECT TO OWNER'S AND ENGINEER'S REVIEW AND ACCEPTANCE. WHERE CONTRACTOR SUBSTITUTES EQUIPMENT REQUIRING A DIFFERENT SYSTEM CONFIGURATION, HE SHALL BE RESPONSIBLE FOR PROVIDING INSTALLATION SHOP DRAWINGS AND ALL RELATED ACCESSORY EQUIPMENT FOR A COMPLETE SYSTEM INSTALLATION.

2.2 DUCTWORK

A. FIBERGLASS DUCTWORK GENERAL: PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

B. NON-METAL FLEXIBLE DUCTS: COMPLY WITH UL 181, CLASS 1. FACTORY-FABRICATED, INSULATED, ROUND DUCT, WITH THE FOLLOWING CONSTRUCTION: LINER: TRIAMINATE OF ALUMINUM FOIL, FIBERGLASS AND ALUMINIZED POLYESTER. MECHANICALLY LOCKED WITHOUT ADHESIVES. REINFORCEMENT STEEL: CORROSION RESISTANT GALVANIZED STEEL WIRE HELIX MECHANICALLY LOCKED TO INNER LINER. INSULATION: 1/2 LB. DENSITY, 1-1/2" THICK FIBERGLASS. OUTER JACKET: GRAY FIRE RETARDENT POLYETHYLENE FILM. CONSTRUCTED IN ACCORDANCE WITH NFPA 90A AND 90B WITH A SMOKE / FLAME SPREAD RATING OF 50/25.

2.3 DUCTWORK ACCESSORIES

A. FIRE DAMPERS: UL LABELED ACCORDING TO UL STANDARD 555 "STANDARD FOR FIRE DAMPERS." FIRE RATING: 1-1/2 OR 3 HOURS, AS REQUIRED. FRAME: TYPE A OR TYPE B; FABRICATED WITH ROLL-FORMED, 21-GAGE, GALVANIZED STEEL; WITH MITERED AND INTERLOCKING CORNERS. MOUNTING SLEEVE: FACTORY-INSTALLED OR FIELD-INSTALLED, GALVANIZED STEEL. MOUNTING ORIENTATION: VERTICAL OR HORIZONTAL AS INDICATED. BLADES: ROLL-FORMED, INTERLOCKING, 21-GAGE GALVANIZED STEEL. IN PLACE OF INTERLOCKING BLADES, PROVIDE FULL-LENGTH, 21-GAGE, GALVANIZED-STEEL BLADE CONNECTORS. HORIZONTAL DAMPERS: INCLUDE A BLADE LOCK AND STAINLESS STEEL NEGATOR CLOSURE SPRING. FUSIBLE LINK: REPLACEABLE, 165 F OR 212 F RATED AS REQUIRED.

B. DUCT-MOUNTED ACCESS DOORS AND PANELS: PROVIDE CONSTRUCTION AND AIR TIGHTNESS SUITABLE FOR DUCT PRESSURE CLASS. FRAME: GALVANIZED SHEET STEEL. PROVIDE WITH BEND-OVER TABS AND FOAM GASKETS. DOOR: DOUBLE-WALL, GALVANIZED SHEET METAL CONSTRUCTION WITH INSULATION FILL. PROVIDE 1-INCH BY 1-INCH BUTT HINGE OR PIANO HINGE AND CAM LATCHES. SEAL AROUND FRAME ATTACHMENT TO DUCT AND DOOR TO FRAME WITH NEOPRENE OR FOAM RUBBER SEALS. INSULATION: 1-INCH THICK FIBER GLASS OR POLYSTYRENE FOAM BOARD.

2.4 NATURAL GAS SYSTEMS

A. PIPE AND TUBING MATERIALS: STEEL PIPE: ASTM A 120, SCHEDULE 40, SEAMLESS, BLACK STEEL PIPE, BEVELED ENDS.

B. FITTINGS: MALLEABLE-IRON THREADED FITTINGS: ANSI B16.3, CLASS 150, STANDARD PATTERN, FOR THREADED JOINTS. THREADS SHALL CONFORM TO ANSI B1.20.1.

C. JOINING MATERIALS: JOINT COMPOUND: SUITABLE FOR THE GAS BEING HANDLED.

D. PIPING SPECIALTIES: UNIONS: ANSI B16.39, CLASS 150 BLACK MALLEABLE IRON; FEMALE PATTERN; BRASS TO IRON SEAT; GROUND JOINT. DIELECTRIC UNIONS: ANSI B16.39, CLASS 250; MALLEABLE IRON AND CAST BRONZE; WITH THREADED OR SOLDERED END CONNECTIONS SUITABLE FOR PIPE TO BE JOINED; DESIGNED TO ISOLATE GALVANIC AND STRAY CURRENT CORROSION.

E. VALVES: GAS COCKS 2 INCH AND SMALLER: 150 PSI WOG, BRONZE BODY, STRAIGHT-AWAY PATTERN, SQUARE HEAD, THREADED ENDS.

2.5 SUPPORTS AND ANCHORS: HANGERS AND SUPPORT COMPONENTS SHALL BE FACTORY FABRICATED OF MATERIALS, DESIGN, AND MANUFACTURER COMPLYING WITH MSS SP-58. COMPONENTS SHALL HAVE GALVANIZED COATINGS WHERE INSTALLED FOR PIPING AND EQUIPMENT THAT WILL NOT HAVE FIELD-APPLIED FINISH. PIPE ATTACHMENTS SHALL HAVE NONMETALLIC COATING FOR ELECTROLYTIC PROTECTION WHERE ATTACHMENTS ARE IN DIRECT CONTACT WITH COPPER TUBING.

2.6 MECHANICAL SYSTEM INSULATION

A. INSULATION GENERAL: CONFORM TO THE FOLLOWING CHARACTERISTICS FOR INSULATION INCLUDING FACINGS, CEMENTS, AND ADHESIVES, WHEN TESTED ACCORDING TO ASTM E 84, BY UL OR OTHER TESTING OR INSPECTING ORGANIZATION ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. LABEL INSULATION WITH APPROPRIATE MARKINGS OF TESTING LABORATORY. INTERIOR INSULATION: FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. EXTERIOR INSULATION: FLAME SPREAD RATING OF 75 OR LESS AND A SMOKE DEVELOPED RATING OF 150 OR LESS.

B. GLASS FIBER INSULATION WITH JACKET: INORGANIC GLASS FIBERS, BONDED WITH A THERMOSETTING RESIN. JACKET: ALL-PURPOSE, FACTORY-APPLIED, LAMINATED GLASS-FIBER-REINFORCED, FLAME-RETARDANT KRAFT PAPER AND ALUMINUM FOIL HAVING SELF-SEALING LAP. BLANKET: ASTM C 553, TYPE II, CLASS F-1. JACKETED FLEXIBLE BLANKETS. THERMAL CONDUCTIVITY: 0.32 AVERAGE MAXIMUM, AT 75 F MEAN TEMPERATURE.

2.7 JOINT SEALERS: PROVIDE 3M FIRE PROTECTION PRODUCTS OR EQUAL. JOINT SEALER PRODUCTS SHALL BE TESTED IN ACCORDANCE WITH ASTM E-119, ASTM E-814 AND ASTM E-84. ALL PRODUCTS SHALL NOT CONTAIN ASBESTOS OR PCB'S. ALL JOINT SEALERS SHALL BE INSTALLED IN U.L. LISTED CONFIGURATIONS.

3. EXECUTION

3.1 ROUGH-IN: VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.

3.2 MECHANICAL INSTALLATIONS: SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT, COMPLY WITH THE FOLLOWING REQUIREMENTS: COORDINATE MECHANICAL SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR MECHANICAL INSTALLATIONS. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH APPROVED SUBMITTAL DATA INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK ARE SHOWN ONLY IN DIAGRAMMATIC FORM. WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS, REFER CONFLICT TO THE ARCHITECT. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL, AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION. INSTALL ACCESS PANEL OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES.

3.3 CUTTING AND PATCHING: PERFORM CUTTING AND PATCHING IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS: PROTECTION OF INSTALLED WORK: DURING CUTTING AND PATCHING OPERATIONS, PROTECT ADJACENT INSTALLATIONS; PROVIDE AND MAINTAIN TEMPORARY PARTITIONS OR DUST BARRIERS ADEQUATE TO PREVENT THE SPREAD OF DUST AND DIRT TO ADJACENT AREAS. FOR NEW BUILDINGS, PATCH FINISHED SURFACES AND BUILDING COMPONENTS USING NEW MATERIALS SPECIFIED FOR THE ORIGINAL INSTALLATION.

3.4 INSTALLATION OF HVAC EQUIPMENT: INSTALL HVAC EQUIPMENT AND COMPONENTS AS RECOMMENDED BY MANUFACTURER.

3.5 INSTALLATION OF DUCTWORK

A. DUCT SYSTEM PRESSURE CLASS: CONSTRUCT AND INSTALL EACH DUCT SYSTEM FOR THE SPECIFIC DUCT PRESSURE CLASSIFICATION INDICATED.

B. PROVIDE CLEARANCE OF 1 INCH WHERE FURRING IS SHOWN FOR ENCLOSURE OR CONCEALMENT OF DUCTS, PLUS ALLOWANCE FOR INSULATION THICKNESS, IF ANY.

C. INSTALL INSULATED DUCTS WITH 1-INCH CLEARANCE OUTSIDE OF INSULATION.

D. CONCEAL DUCTS FROM VIEW IN FINISHED AND OCCUPIED SPACES BY LOCATING IN MECHANICAL SHAFTS, HOLLOW WALL CONSTRUCTION, OR ABOVE SUSPENDED CEILINGS. DO NOT ENCASE HORIZONTAL RUNS IN SOLID PARTITIONS, EXCEPT AS SPECIFICALLY SHOWN.

E. COORDINATE LAYOUT WITH SUSPENDED CEILING AND LIGHTING LAYOUTS AND SIMILAR FINISHED WORK.

F. FLEXIBLE DUCTWORK SHALL BE INSTALLED WITH A MINIMUM AMOUNT OF SAG WITH NO JOINTS.

G. FLEXIBLE DUCTWORK SHALL BE LIMITED IN LENGTH TO 8 FEET.

H. VACUUM DUCTS SYSTEMS PRIOR TO FINAL ACCEPTANCE TO REMOVE DUST AND DEBRIS.

3.6 INSTALLATION OF DUCTWORK ACCESSORIES: INSTALL DUCTWORK ACCESSORIES AS RECOMMENDED BY MANUFACTURER.

3.7 INSTALLATION OF NATURAL GAS SYSTEMS

A. INSTALL STEEL PIPE WITH THREADED JOINTS AND FITTINGS FOR 2 INCH AND SMALLER, AND WITH WELDED JOINTS FOR 2-1/2 INCH AND LARGER.

B. PIPING INSTALLATIONS:

1. GENERAL: CONFORM TO THE REQUIREMENTS OF NFPA 54 - NATIONAL FUEL GAS CODE.

2. LOCATIONS AND ARRANGEMENTS: DRAWINGS (PLANS, SCHEMATICS, AND DIAGRAMS) INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. DESIGN LOCATIONS AND ARRANGEMENTS OF PIPING TAKE INTO CONSIDERATION PIPE SIZING, FLOW DIRECTION, SLOPE OF PIPE, EXPANSION, AND OTHER DESIGN CONSIDERATIONS. SO FAR AS PRACTICAL, INSTALL PIPING AS INDICATED.

3. CONCEALED LOCATIONS: EXCEPT AS SPECIFIED BELOW, INSTALL CONCEALED GAS PIPING IN AN AIR-TIGHT CONDUIT CONSTRUCTED OF SCHEDULE 40, SEAMLESS BLACK STEEL WITH WELDED JOINTS. VENT CONDUIT TO THE OUTSIDE AND TERMINATE WITH A SCREENED VENT CAP. ABOVE-CEILING LOCATIONS: GAS PIPING MAY BE INSTALLED IN ACCESSIBLE ABOVE-CEILING SPACES (SUBJECT TO THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION), WHETHER OR NOT SUCH SPACES ARE USED AS A PLENUM. VALVES SHALL NOT BE LOCATED IN SUCH SPACES. PIPING IN PARTITIONS: CONCEALED PIPING SHALL NOT BE LOCATED IN SOLID PARTITIONS. TUBING SHALL NOT BE RUN INSIDE HOLLOW WALLS OR PARTITIONS UNLESS PROTECTED AGAINST PHYSICAL DAMAGE. THE DOES NOT APPLY TO TUBING PASSING THROUGH WALLS OR PARTITIONS.

4. SEAL PIPE PENETRATIONS OF FIRE BARRIERS USING FIRE BARRIER PENETRATION SEALERS.

5. DRIPS AND SEDIMENT TRAPS: INSTALL A DRIP LEG AT POINTS WHERE CONDENSATE MAY COLLECT, AT THE OUTLET OF THE GAS METER, AND IN A LOCATION READILY ACCESSIBLE TO PERMIT CLEANING AND EMPTYING. DO NOT INSTALL DRIPS WHERE CONDENSATE IS LIKELY TO FREEZE. CONSTRUCT DRIPS AND SEDIMENT TRAPS USING A TEE FITTING WITH THE BOTTOM OUTLET PLUGGED OR CAPPED. USE A MINIMUM OF 3 PIPE DIAMETERS IN LENGTH FOR THE DRIP LEG. USE SAME SIZE PIPE FOR DRIP LEG AS THE CONNECTED PIPE.

6. USE FITTINGS FOR ALL CHANGES IN DIRECTION AND ALL BRANCH CONNECTIONS. INSTALL EXPOSED PIPING AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE NOT PERMITTED, UNLESS EXPRESSLY INDICATED.

7. INSTALL PIPING FREE OF SAGS OR BENDS AND WITH AMPLE SPACE BETWEEN PIPING TO PERMIT PROPER INSULATION APPLICATIONS.

8. CONCEAL ALL PIPE INSTALLATIONS IN WALLS, PIPE CHASES, UTILITY SPACES, ABOVE CEILINGS, BELOW GRADE OR FLOORS, UNLESS INDICATED TO BE EXPOSED TO VIEW.

9. INSTALL PIPING TIGHT TO SLABS, BEAMS, JOISTS, COLUMNS, WALLS, AND OTHER PERMANENT ELEMENTS OF THE BUILDING. PROVIDE SPACE TO PERMIT INSULATION APPLICATIONS, WITH 1" CLEARANCE OUTSIDE THE INSULATION. ALLOW SUFFICIENT SPACE ABOVE REMOVABLE CEILING PANELS TO ALLOW FOR PANEL REMOVAL.

10. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER, SPACED TO PERMIT APPLYING INSULATION AND SERVICING OF VALVES.

11. INSTALL GAS PIPING AT A UNIFORM GRADE OF 1/4 INCH IN 15 FEET, UPWARD TO RISERS, AND FROM THE RISERS TO THE METER, OR SERVICE REGULATOR WHEN METER IS NOT PROVIDED, OR THE EQUIPMENT.

12. MAKE REDUCTIONS IN PIPE SIZES USING ECCENTRIC REDUCER FITTINGS INSTALLED WITH THE LEVEL SIDE DOWN.

13. CONNECT BRANCH OUTLET PIPES FROM THE TOP OR SIDES OF HORIZONTAL LINES, NOT FROM THE BOTTOM.

C. PIPE JOINT CONSTRUCTION: WELDED JOINTS: COMPLY WITH THE REQUIREMENTS IN ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX. THREADED JOINTS: CONFORM TO ANSI B1.20.1, TAPERED PIPE THREADS FOR FIELD CUT THREADS, FLANGED JOINTS: ALIGN FLANGES SURFACES PARALLEL. ASSEMBLE JOINTS BY SEQUENCING BOLT TIGHTENING TO MAKE INITIAL CONTACT OF FLANGES AND GASKETS AS FLAT AND PARALLEL AS POSSIBLE. USE SUITABLE LUBRICANTS ON BOLT THREADS. TIGHTEN BOLTS GRADUALLY AND UNIFORMLY TO APPROPRIATE TORQUE SPECIFIED BY THE BOLT MANUFACTURER.

D. ELECTRICAL BONDING AND GROUNDING: INSTALL ABOVE GROUND PORTIONS OF GAS PIPING SYSTEMS, UPSTREAM FROM EQUIPMENT SHUTOFF VALVES ELECTRICALLY CONTINUOUS AND BONDED TO A GROUNDING ELECTRODE IN ACCORDANCE WITH NFPA 70 - "NATIONAL ELECTRICAL CODE." DO NOT USE GAS PIPING AS A GROUNDING ELECTRODE. CONFORM TO NFPA 70 - "NATIONAL ELECTRICAL CODE," FOR ELECTRICAL CONNECTIONS BETWEEN WIRING AND ELECTRICALLY OPERATED CONTROL DEVICES.

E. PIPING TESTS: INSPECT, TEST, AND PURGE NATURAL GAS SYSTEMS IN ACCORDANCE WITH NFPA 54, AND LOCAL UTILITY REQUIREMENTS.

3.8 INSTALLATION OF HANGERS AND SUPPORTS

A. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE; COMPLY WITH MSS SP-69 AND SP-89. ARRANGE FOR GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING SUPPORTED TOGETHER ON FIELD-FABRICATED, HEAVY-DUTY TRAPEZE HANGERS WHERE POSSIBLE. INSTALL SUPPORTS WITH MAXIMUM SPACINGS COMPLYING WITH MSS SP-69. WHERE PIPING OF VARIOUS SIZES IS SUPPORTED TOGETHER BY TRAPEZE HANGERS, SPACE HANGERS FOR SMALLEST PIPE SIZE OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPE AS SPECIFIED ABOVE FOR INDIVIDUAL PIPE HANGERS.

B. INSTALL BUILDING ATTACHMENTS WITHIN CONCRETE OR TO STRUCTURAL STEEL. SPACE ATTACHMENTS WITHIN MAXIMUM PIPING SPAN LENGTH INDICATED IN MSS SP-69. INSTALL ADDITIONAL ATTACHMENTS AT CONCENTRATED LOADS, INCLUDING VALVES, FLANGES, GUIDES, STRAINERS, EXPANSION JOINTS, AND AT CHANGES IN DIRECTION OF PIPING. INSTALL CONCRETE INSERTS BEFORE CONCRETE IS PLACED; FASTEN INSERT TO FORMS. WHERE CONCRETE WITH COMPRESSIVE STRENGTH LESS THAN 2,500 PSI IS INDICATED, INSTALL REINFORCING BARS THROUGH OPENINGS AT TOP OF INSERTS.

C. INSTALL HANGERS AND SUPPORTS COMPLETE WITH NECESSARY INSERTS, BOLTS, RODS, NUTS, WASHERS, AND OTHER ACCESSORIES.

D. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS AND SIMILAR UNITS.

3.9 INSTALLATION OF MECHANICAL SYSTEM INSULATION

A. SURFACE PREPARATION: CLEAN, DRY, AND REMOVE FOREIGN MATERIALS SUCH AS RUST, SCALE, AND DIRT.

B. FIBERGLASS BLANKET DUCT INSULATION INSTALLATION: INSTALL TIGHT AND SMOOTH. SECURE TO DUCTS HAVING LONG SIDES OR DIAMETERS AS FOLLOWS: SMALLER THAN 24 INCHES: BONDING ADHESIVE APPLIED IN 6-INCH-WIDE TRANSVERSE STRIPS ON 12-INCH CENTERS. 24 INCHES AND LARGER: ANCHOR PINS SPACED 12 INCHES APART EACH WAY. APPLY BONDING ADHESIVE TO PREVENT SAGGING OF THE INSULATION. OVERLAP JOINTS 3 INCHES. SEAL JOINTS, BREAKS, AND PUNCTURES WITH VAPOR BARRIER COMPOUND.

C. DUCT SYSTEMS: UNLESS OTHERWISE INDICATED, INSULATE THE FOLLOWING DUCT SYSTEMS: SUPPLY, RETURN AND OUTSIDE AIR DUCTWORK.

D. HVAC SUPPLY, RETURN AND OUTSIDE AIR DUCTS INSULATION SCHEDULE: 3 INCH THICK GLASS FIBER BLANKET INSULATION, MINIMUM R-8 INSULATION.

3.10 JOINT SEALER INSTALLATIONS: VERIFY ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS TO DETERMINE WHERE ALL PIPING AND DUCTWORK PASSES THROUGH FIRE SMOKE RATED WALLS, CEILINGS, FLOORS OR OTHER BUILDING ELEMENTS THAT REQUIRE PENETRATIONS TO BE SEALED. INSTALL ALL JOINT SEALERS AS SPECIFIED PER THE MANUFACTURER. ALL JOINT SEALING SYSTEMS SHALL BE U.L. RATED AND INSTALLED IN U.L. LISTED CONFIGURATIONS.

3.11 TESTING, ADJUSTING AND BALANCING: TEST, ADJUST, AND BALANCE THE FOLLOWING MECHANICAL SYSTEMS: SUPPLY AIR SYSTEMS, RETURN AIR SYSTEMS, EXHAUST AIR SYSTEMS. VERIFY TEMPERATURE CONTROL SYSTEM OPERATION.

PROJECT TITLE

MOZZICATO - BANK BUILDING
NEW BRITAIN AVENUE
PLAINVILLE, CT 06062

SHEET TITLE

MECHANICAL NOTES, SYMBOLS & SPECIFICATIONS

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PROJECT NO.

G99-23

DRAWN BY:

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KWK

SCALE:

AS-NOTED

DATE:

12-21-2009

FILE NAME:

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DRAWING NUMBER

M1

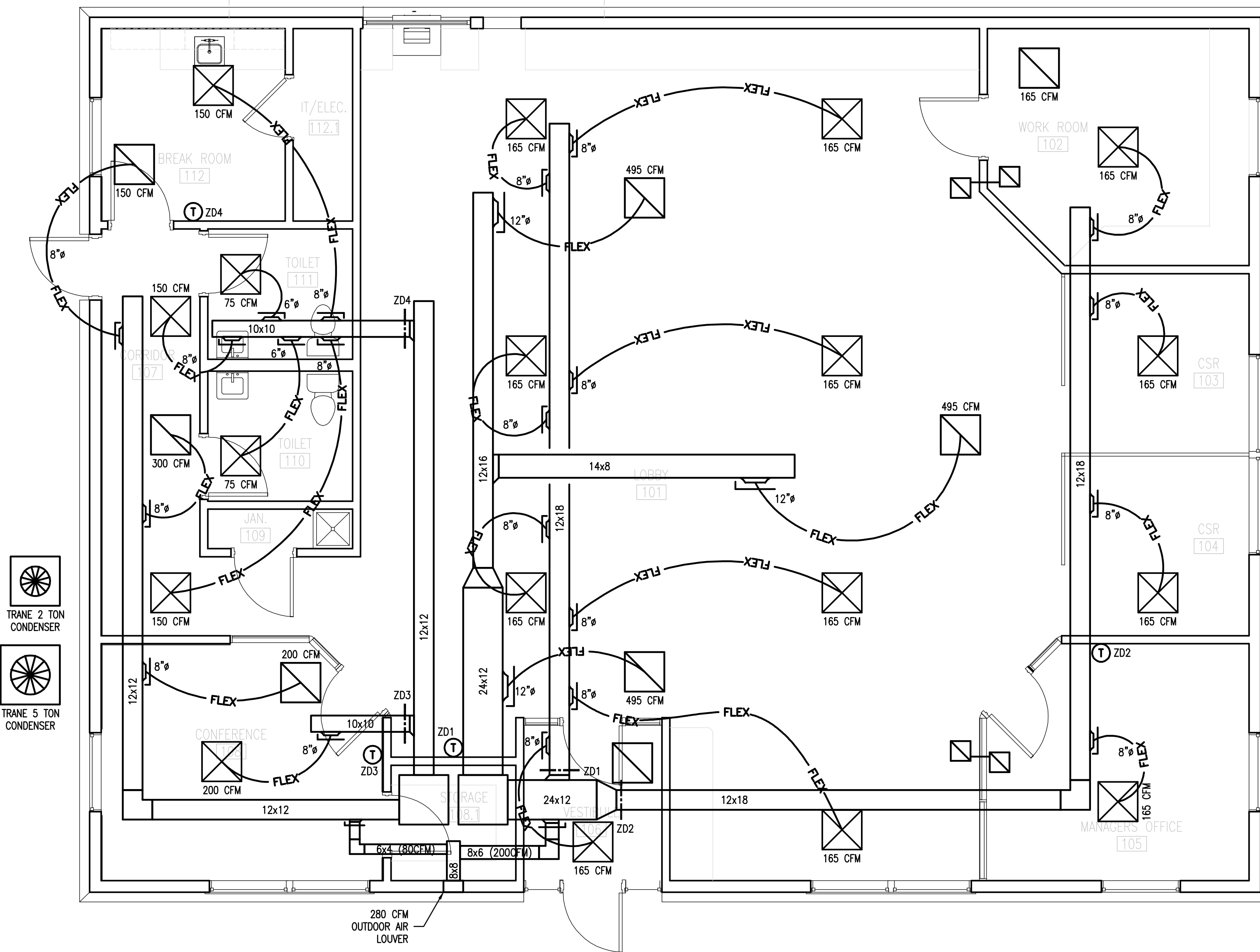
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PROJECT TITLE

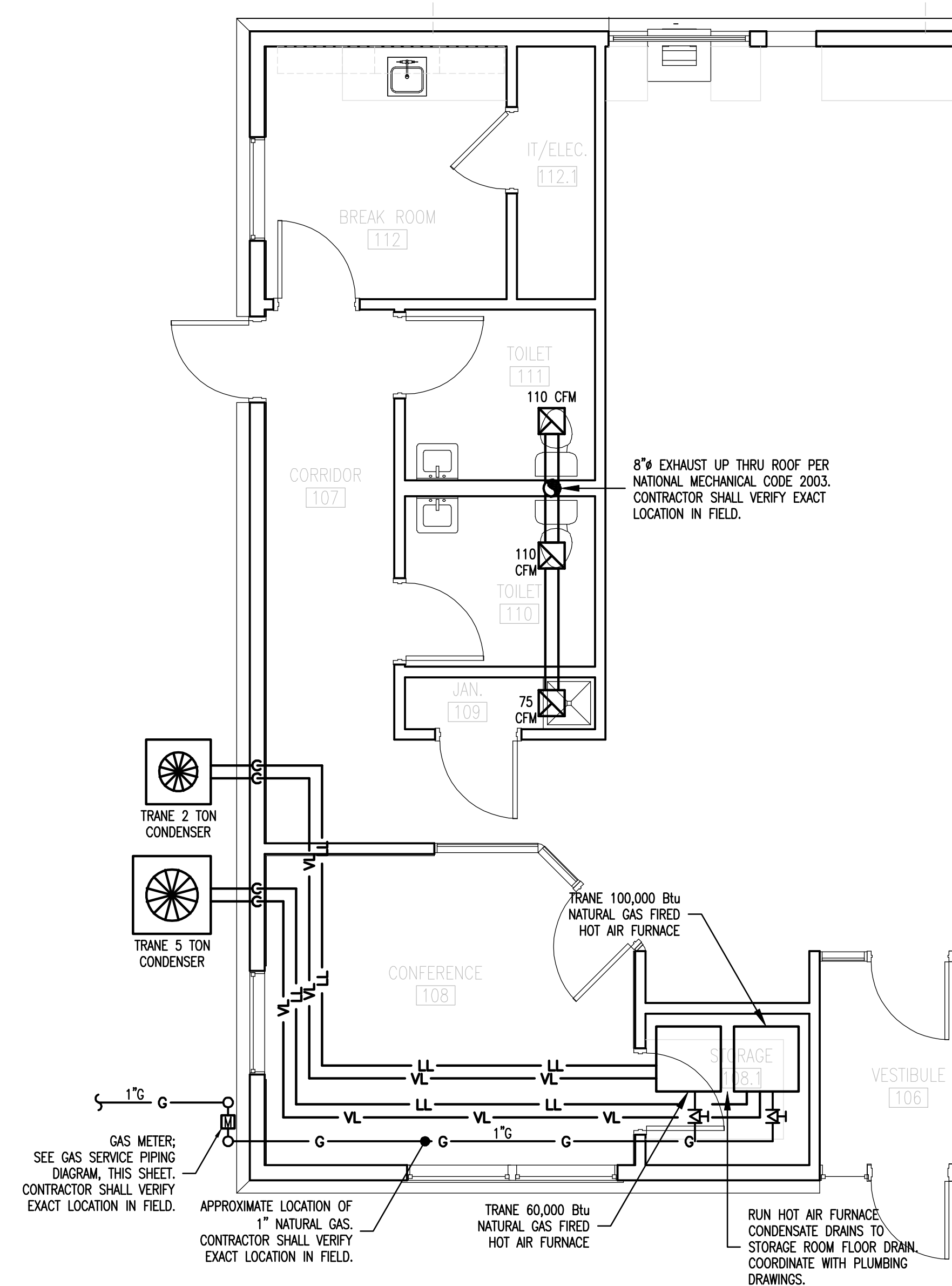
MOZZICATO - BANK BUILDING
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SHEET TITLE

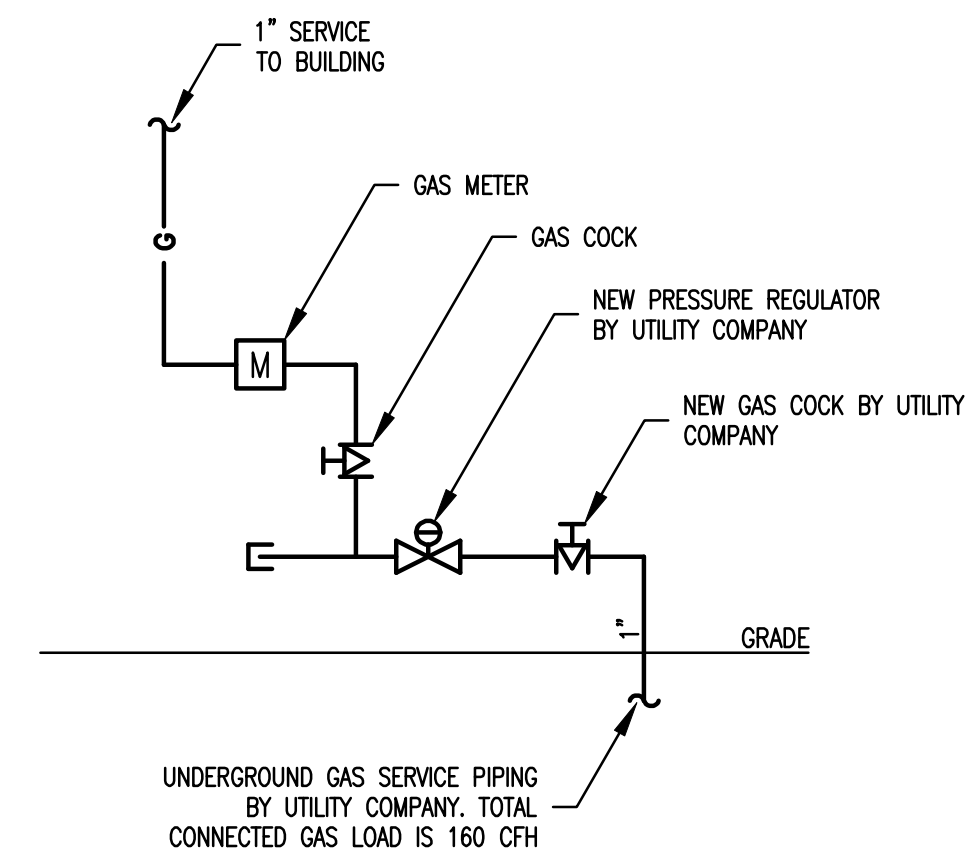
MECHANICAL NOTES, SYMBOLS & SPECIFICATIONS



1
M2
MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



2
M2
MECHANICAL PARTIAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



3
M2
GAS SERVICE PIPING DIAGRAM

SEAL	
PROJECT TITLE MOZZICATO - BANK BUILDING NEW BRITAIN AVENUE PLAINVILLE, CT 06062	
SHEET TITLE MECHANICAL FLOOR PLANS	
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