

PLUMBING GENERAL NOTES:

GENERAL:
THESE GENERAL NOTES PRESENT AND/OR SUMMARIZE KEY PRODUCT INFORMATION FOR THE PLANNING READER'S CONVENIENCE. SEE PLANS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS.

WORK COVERED BY THIS DOCUMENT SHALL INCLUDE ALL LABOR, MATERIAL, PRODUCTS, AND SERVICES FOR, AND INCIDENTAL TO, INSTALLATION OF COMPLETE AND OPERATING PLUMBING SYSTEMS DRAWN OR SPECIFIED.

ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES INCLUDING, BUT NOT LIMITED TO, 2018 INTERNATIONAL PLUMBING CODE w/ AMENDMENTS, 2018 INTERNATIONAL FUEL GAS CODE w/ AMENDMENTS, 2017 ADA STANDARDS FOR ACCESSIBLE DESIGN AND ALL ADA AMENDMENTS.

ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED EQUAL" BY THE ARCHITECT OR ENGINEER.

INSTALL ALL PLUMBING FIXTURES PER MANUFACTURER'S INSTRUCTIONS.

EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS. LARGE SCALE ARCHITECTURAL DETAILS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS, PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.

PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED). EXACT LOCATION SHALL BE DETERMINED BY JOB CONDITIONS. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH THAT OF OTHER TRADES AND ARRANGE PIPING TO CLEAR STRUCTURAL MEMBERS AND DUCTWORK. EXACT LOCATIONS SHALL BE PROVIDED ON "AS-BUILT" DRAWINGS.

MINIMUM SIZE WATER LINE FOR THREE OR MORE FIXTURES SHALL BE 3/4". REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL RUNOUT SIZES.

ALL PIPING TO BE CONCEALED IN A WALL, CEILING, OR A CHASE UNLESS OTHERWISE NOTED. PIPING SHOWN OUT OF CHASES FOR CLARITY.

PROVIDE SLEEVES FOR PIPES PASSING THROUGH FLOORS, MASONRY WALLS AND FIRE OR SMOKE PARTITIONS. PACK MINERAL WOOL IN ANNULAR SPACE BETWEEN PIPE SLEEVE.

REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE MOUNTING HEIGHTS. ALL ACCESSIBLE FIXTURES SHALL COMPLY WITH STATE BUILDING CODE AND 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.

ARRANGEMENTS OF WORK SHALL BE AS SHOWN. DRAWINGS ARE NOT INTENDED TO INDICATE ALL OFFSETS AND FITTINGS. EXAMINE ALL DRAWINGS, INVESTIGATE CONDITIONS TO BE ENCOUNTERED AND ARRANGE WORK ACCORDINGLY. FURNISH ALL FITTINGS AND OFFSETS.

MEASUREMENT OF DRAWINGS BY SCALE SHALL NOT BE USED AS DIMENSIONS FOR FABRICATION. MEASUREMENTS FOR LOCATING FIXTURES, EQUIPMENT, DUCTWORK, PIPING AND ACCESSORIES SHALL BE MADE ON THE SITE AND SHALL BE BASED ON ACTUAL JOB CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEASUREMENTS WHERE THE CONTRACTOR PREFABRICATES ANY WORK BASED ON THE DRAWINGS WITHOUT VERIFYING ACTUAL JOB CONDITIONS. THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COST INVOLVED IN MAKING CHANGES TO PREFABRICATED WORK WHERE CONFLICTS OCCUR.

ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION TO ALLOW FOR INSTALLATIONS.

INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL, PLUMB, PARALLEL, AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS.

COPPER PIPING SHALL NOT BE INSTALLED IN DIRECT CONTACT WITH MASONRY, CEMENT MORTAR, CONCRETE, OR DISSIMILAR METALS. PLUMBING CONTRACTOR TO PROVIDE SLEEVES AND COORDINATE w/ GENERAL CONTRACTOR DURING SLAB INSTALLATION.

CUTTING AND REPAIRING: THE PLUMBING CONTRACTOR SHALL DO ALL CUTTING AND REPAIRING OF WALLS, FLOORS, CEILINGS, ETC. NECESSARY FOR THE INSTALLATION OF THE WORK BUT HE SHALL NOT CUT INTO ANY STRUCTURAL MEMBER WITHOUT THE PERMISSION OF THE ARCHITECT.

PROVIDE SHOCK ABSORBERS AS INDICATED ON PLANS.

PLUMBING CONTRACTOR TO PROVIDE PROPER SEPARATION BETWEEN WATER SUPPLY AND WASTE/SANITARY PIPING PER INTERNATIONAL PLUMBING CODE.

PLUMBING CONTRACTOR TO PROVIDE PREPRINTED 1/2" HIGH LETTERED LABELS FOR THE FOLLOWING: INTERIOR MAIN SHUT-OFF VALVE, POTABLE WATER SUPPLY PIPING, AND HOT WATER PIPING. LABELS SHOULD BE MOUNTED EVERY 20'-0" ON HORIZONTAL PIPING.

GENERAL CONTRACTOR TO PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE ABOVE CEILING VALVES AND EQUIPMENT. COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

DOMESTIC WATER PIPING:
UNDER-BUILDING SLAB, DOMESTIC WATER, BUILDING SERVICE PIPING SHALL BE SOFT COPPER TUBING, ASTM B 88, TYPE K, WITH WROUGHT-COPPER, SOLDER-JOINT FITTINGS, AND BRAZED JOINTS. AVOID JOINTS UNDER BUILDING SLAB WHERE POSSIBLE.

ALL OTHER UNDER-BUILDING SLAB, DOMESTIC WATER PIPING SHALL BE SOFT COPPER TUBING, ASTM B 88, TYPE L, WITH WROUGHT-COPPER, SOLDER-JOINT FITTINGS, AND BRAZED JOINTS. AVOID JOINTS UNDER BUILDING SLAB WHERE POSSIBLE.

ALL ABOVEGROUND DOMESTIC WATER PIPING SHALL BE HARD COPPER TUBING, ASTM B 88, TYPE L, WITH CAST- OR WROUGHT-COPPER, SOLDER-JOINT FITTINGS, AND SOLDERED JOINTS.

ALL INDOOR DOMESTIC COLD, HOT, AND RECIRCULATED HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK MINERAL-FIBER, PREFORMED PIPE INSULATION, COMPLYING WITH ASTM C 547, TYPE I, GRADE A, WITH FACTORY-APPLIED ASJ. INSTALL INSULATION CONTINUOUSLY THROUGH WALL, PARTITION, FLOOR, AND ROOF PENETRATIONS.

-OR-

ALL INDOOR DOMESTIC COLD, HOT, AND RECIRCULATED HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK FLEXIBLE CLOSED-CELL ELASTOMERIC INSULATION, COMPLYING WITH ASTM C 534, TYPE 1 FOR TUBULAR MATERIALS, EQUAL TO ARMACELL "AP ARMAFLEX". INSTALL INSULATION CONTINUOUSLY THROUGH WALL, PARTITION, FLOOR, AND ROOF PENETRATIONS.

SANITARY WASTE AND VENT PIPING:
ALL SOIL, DRAIN, WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV WITH SOLVENT WELD JOINTS, CONFORMING TO ASTM D 2665 AND ASTM D 2564. IN AREAS WITH RETURN AIR PLENUM ABOVE THE CEILING, TRANSITION PIPING BELOW CEILING FROM PVC TO HUBLESS CAST-IRON, EXTEND CAST IRON VENT THROUGH ROOF. PVC PIPING IS NOT ALLOWED IN RETURN AIR PLENUM SPACES.

ALL SOIL, DRAIN, WASTE AND VENT PIPING LOCATED IN RETURN AIR PLENUMS SHALL BE HUBLESS CAST-IRON SOIL PIPE AND FITTINGS, CONFORMING TO ASTM A 888 OR CISPI 301, WITH CISPI HUBLESS PIPING COUPLINGS, CONFORMING TO ASTM C 1277 AND CISPI 310, AND COUPLED JOINTS.

ALL PIPING PASSING THROUGH THE ROOF SHALL BE FLASHED WITH ROOF FLASHING ASSEMBLY COMPATIBLE WITH THE ROOFING SYSTEM.

GAS PIPING:
ALL OUTDOOR, UNDERGROUND GAS PIPING SHALL BE PE PIPE AND FITTINGS, COMPLYING WITH ASTM D 2513, ASTM D 2663, AND ASTM D 3261, JOINED BY HEAT FUSION, WITH SERVICE-LINE RISERS WITH TRACER WIRE TERMINATED IN AN ACCESSIBLE LOCATION.

ALL OUTDOOR, ABOVEGROUND GAS PIPING SHALL BE SCHEDULE 40, BLACK STEEL PIPE, COMPLYING WITH ASTM A 53, WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS, COMPLYING WITH ASTM A 234. JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.

ALL INDOOR, ABOVEGROUND GAS PIPING SHALL BE SCHEDULE 40, BLACK STEEL PIPE, COMPLYING WITH ASTM A 53, WITH MALLEABLE-IRON FITTINGS AND THREADED JOINTS, COMPLYING WITH ASME B 16.3, OR WROUGHT-STEEL FITTINGS AND WELDED JOINTS, COMPLYING WITH ASTM A 234. JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.

PRESSURE REGULATORS SHALL BE SINGLE STAGE AND SUITABLE FOR NATURAL GAS. SERVICE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.80. LINE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.80. APPLIANCE PRESSURE REGULATORS SHALL COMPLY WITH ANSI Z21.18.

GAS PIPING ON ROOF SHALL BE SUPPORTED ON SLOW BLOC SUPPORTS, MIRO MODEL 1.5, OR EQUAL.

THERMAL HANGER SHIELD INSERTS:
INSTALL THERMAL HANGER SHIELD INSERT IN PIPE HANGERS FOR INSULATED PIPING, WITH PROTECTIVE SADDLE. FOR COLD PIPING, INSERT MATERIAL SHALL BE ASTM C552, TYPE II CELLULAR GLASS WITH 100-PSI COMPRESSIVE STRENGTH AND 1 POLYURETHANE WITH 125-PSI MINIMUM COMPRESSIVE STRENGTH AND 100-PSI MINIMUM COMPRESSIVE STRENGTH. FOR HOT PIPING, INSERT MATERIAL SHALL BE ASTM C553, TYPE I CALCIUM SILICATE WITH 100-PSI COMPRESSIVE STRENGTH AND 1 CELLULAR GLASS WITH 100-PSI, OR ASTM C591, TYPE VI, GRADE 1 POLYURETHANE WITH 125-PSI MINIMUM COMPRESSIVE STRENGTH.

SLEEVES AND SLEEVE SEALS:
INSTALL SLEEVES FOR PIPING PASSING THROUGH PENETRATIONS IN FLOORS, PARTITIONS, ROOFS, AND WALLS. INSTALL SLEEVES IN CONCRETE FLOORS, CONCRETE PARTITIONS, AND CONCRETE WALLS AS NEW SLABS AND WALLS ARE CONSTRUCTED. CUT SLEEVES TO LENGTH FOR MOUNTING FLUSH WITH BOTH SURFACES. USING GROUT OR POLYURETHANE SEALANT, SEAL OUTSIDE OF SLEEVES IN SLABS AND WALLS WITHOUT SLEEVE SEAL SYSTEM. INSTALL SLEEVES THAT ARE LARGE ENOUGH TO PROVIDE 1/4-INCH ANNULAR CLEAR SPACE BETWEEN SLEEVE AND PIPE OR PIPE INSULATION. SEAL ANNULAR SPACE BETWEEN SLEEVE AND PIPING OR PIPING INSULATION. FOR SLEEVES THAT WILL HAVE SLEEVE-SEAL SYSTEM INSTALLED, SELECT SLEEVES OF SIZE LARGE

ENOUGH TO PROVIDE 1-INCH ANNULAR CLEAR SPACE BETWEEN PIPING AND CONCRETE SLABS AND WALLS. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES. MAINTAIN INDICATED FIRE OR SMOKE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE PENETRATIONS THROUGH RATED CONSTRUCTION. SEAL PIPE PENETRATIONS WITH FIRE- AND SMOKE-STOP MATERIALS.

USE SLEEVES AND SLEEVE SEALS FOR THE FOLLOWING PIPING-PENETRATION APPLICATIONS:
EXTERIOR CONCRETE WALLS ABOVE GRADE: STEEL PIPE SLEEVES, ASTM A 53, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED, WITH PLAIN ENDS AND INTEGRAL WATERSTOP COLLAR.
EXTERIOR CONCRETE WALLS BELOW GRADE: CAST-IRON PIPE SLEEVES, WITH PLAIN ENDS AND INTEGRAL WATERSTOP COLLAR WITH SLEEVE-SEAL SYSTEM.

CONCRETE SLAB-ON-GRADE: CAST-IRON PIPE SLEEVES, WITH PLAIN ENDS AND INTEGRAL WATERSTOP COLLAR WITH SLEEVE-SEAL SYSTEM.
CONCRETE SLABS ABOVE GRADE: STACK-SLEEVE FITTINGS.
INTERIOR PARTITIONS: STEEL PIPE SLEEVES, ASTM A 53, TYPE E, GRADE B, SCHEDULE 40, GALVANIZED, WITH PLAIN ENDS AND INTEGRAL WELDED WATERSTOP COLLAR FOR PIPING SMALLER THAN NPS 6; GALVANIZED-STEEL SHEET SLEEVES, 0.0239-INCH MINIMUM THICKNESS, ROUND TUBE CLOSED WITH WELDED LONGITUDINAL JOINT FOR PIPING NPS 6 AND LARGER.

FIELD QUALITY CONTROL:
ALL DOMESTIC WATER PIPING SHALL BE TESTED FOR LEAKS AND DEFECTS; FILL DOMESTIC WATER PIPING, CAP, AND SUBJECT PIPING TO STATIC WATER PRESSURE OF 50 PSIG ABOVE OPERATING PRESSURE, WITHOUT EXCEEDING PRESSURE RATING OF PIPING SYSTEM MATERIALS. ISOLATE TEST SOURCE AND ALLOW IT TO STAND FOR FOUR HOURS.

LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. LEAVE DOMESTIC WATER PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED.

ALL SANITARY WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS AND DEFECTS AT COMPLETION OF ROUGH-IN. CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. FROM 15 MINUTES BEFORE INSPECTION STARTS TO COMPLETION OF INSPECTION, WATER LEVEL MUST NOT DROP. INSPECT JOINTS FOR LEAKS. REPAIR LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST PIPING, OR PORTIONS THEREOF, UNTIL SATISFACTORY RESULTS ARE OBTAINED. INSTALL TEST TEES WHEN THE SYSTEM IS TO BE TESTED IN SECTIONS. LEAVE SANITARY WASTE AND VENT PIPING UNCOVERED AND UNCONCEALED UNTIL IT HAS BEEN TESTED AND APPROVED.

TEST, INSPECT, AND PURGE NATURAL GAS PIPING SYSTEM IN ACCORDANCE TO THE INTERNATIONAL FUEL GAS CODE AND AUTHORITY HAVING JURISDICTION.

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
	UNDERGROUND SOIL & WASTE PIPING
	VENT PIPING
	FLOOR DRAIN (SEE SCHEDULE)
	HUB DRAIN
	WALL CLEANOUT (SEE SCHEDULE)
	FLOOR CLEANOUT (SEE SCHEDULE)
	GROUND CLEANOUT (SEE SCHEDULE)
	VENT THROUGH ROOF
	VENT PIPE
	WASTE PIPING
	CAST IRON
	SANITARY PIPING
	GAS PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	WALL DRAIN BOX (SEE PLUMBING SCHEDULE)
	PRESSURE REDUCING VALVE
	DOWN
	TYPICAL
	UNLESS NOTED OTHERWISE
	INVERT ELEVATION
	FLOW ARROW
	POTABLE WATER PIPING
	POTABLE WATER UNDERGROUND PIPING
	110°F HOT WATER PIPING
	HOT WATER RECIRCULATION PIPING
	FULL PORT BALL VALVE
	WALL HYDRANT (SEE PLUMBING SCHEDULE)
	HOSE BIBB (SEE PLUMBING SCHEDULE)
	PIPE DOWN
	PIPE UP
	P-TRAP

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CLIENT: CITY OF NORTH AUGUSTA, SC
100 GEORGIA AVENUE, NORTH AUGUSTA, SC 29841

PROJECT NAME: NORTH AUGUSTA FIRE STATION 1 RELOCATION

PROJECT LOCATION: 311 W. MARTINTOWN ROAD, NORTH AUGUSTA, SC 29841

STEWART COOPER-NOWELL
REGISTERED PROFESSIONAL ENGINEER
STATE OF SOUTH CAROLINA
NO. 25823
EXPIRES 12/31/2024

REV	DATE	BY	ISSUED FOR	DESCRIPTION
0	10/08/20	CVW		

PROJECT NO. 3057.2003
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CHECKED BY: CVW
DATE: 10/08/2020

PLUMBING GENERAL NOTES AND LEGEND

SCALE: AS NOTED
DRAWING NO. P-001
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