PLUMBING SPECIFICATIONS

15000 - GENERAL PROVISIONS

PART 1 GENERAL

1.01 SCOPE

A. PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY FOR AND INCIDENTAL TO THE WORK AS SHOWN ON THE DRAWINGS OR SPECIFIED AND IN CONFORMANCE WITH OTHER CONTRACT DOCUMENTS.

B. PERFORM MECHANICAL WORK IN STRICT ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES, NATIONAL FIRE PROTECTION ASSOCIATION, REFERENCED CODES AND STANDARDS BY VARIOUS TECHNICAL SOCIETIES, FEDERAL OCCUPATIONAL SAFETY AND HEALTH STANDARDS, LOCAL INSPECTOR REQUIREMENTS, AND OWNER INSURING AGENCY REQUIREMENTS.

C. CONTRACTOR SHALL APPLY AND PAY FOR NECESSARY PERMITS AND CERTIFICATES OF INSPECTION REQUIRED BY THE CODE AUTHORITY.

D. FINISH PAINTING IS TO BE PROVIDED BY THE GENERAL CONTRACTOR, ECEPT AS NOTED ELSEWHERE. THIS CONTRACTOR SHALL RESTORE TO THE ORIGINAL CONDITION , ANY PAINTING DEFACED BY HIM AFTER ORIGINAL PAINTING.

E. THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED, SHALL PROVIDE POWER WIRING FOR EACH ITEM OF ELECTRICAL EQUIPMENT AND MAKE FINAL CONNECTIONS TO MOTORS.

F. PROVIDE NECESSARY CONTROLS, RELAYS, ETC. REQUIRED FOR PROPER OPERATION OF ALL EQUIPMENT.

G. GUARANTEE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE 1 YEAR FROM DATE OF FINAL ACCEPTANCE.THIS CONTRACTOR WILL BE RESPONSIBLE FOR ADJUSTMENTS TO ENSURE EFFICIENT AND PROPER OPERATION OF SYSTEMS AND EQUIPMENT DURING THE GUARANTEE PERIOD.

1.02 CUTTING AND PATCHING

A. THE CONTRACTOR FOR THIS DIVISION SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF HIS WORK.

1.0 EAMINATION OF SITE

A. THE CONTRACTOR SHALL FIELD VERIFY EISTING CONDITIONS. LOCATIONS OF EISTING UTILITIES INDICATED ARE APPROIMATE. THE CONTRACTOR SHALL FIELD VERIFY SIES, LOCATIONS AND INVERT ELEVATIONS AS NECESSARY.

1.04 SUBMITTAL PROCEDURES

A. SUBMITTAL INFORMATION INCLUDE A COVER PAGE WITH THE FOLLOWING INFORMATION WITH EACH SUBMITTAL

1. PROECT NAME.
2. DATE.
   NAME OF ARCHITECT/ENGINEER.
4. NAME OF CONSTRUCTION MANAGER.
5. NAME OF CONTRACTOR.
6. NAME OF FIRM OR ENTITY THAT PREPARED SUBMITTAL.
7. NAMES OF SUBCONTRACTOR, MANUFACTURER, AND SUPPLIER.
8. UNIQUE SUBMITTAL NUMBER, INCLUDING REVISION IDENTIFIER. INCLUDE SPECIFICATION SECTION NUMBER WITH SEQUENTIAL ALPHANUMERIC IDENTIFIER AND ALPHANUMERIC SUFFI FOR RESUBMITTALS.
9. CATEGORY AND TYPE OF SUBMITTAL.
10. NUMBER AND TITLE OF SPECIFICATION SECTION, WITH PARAGRAPH NUMBER AND GENERIC NAME FOR EACH OF MULTIPLE ITEMS.
11. INDICATION OF FULL OR PARTIAL SUBMITTAL.
12. OTHER NECESSARY IDENTIFICATION.
1. REMARKS.
14. SIGNATURE OF TRANSMITTER.
15. PROVIDE A SPACE TO RECORD CONTRACTORS REVIEW AND APPROVAL MARKINGS AND ACTION TAKEN BY ARCHITECT AND ENGINEER.

B. DEVIATIONS AND ADDITIONAL INFORMATION ON EACH SUBMITTAL, CLEARLY INDICATE DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS, INCLUDING MINOR VARIATIONS AND LIMITATIONS INCLUDE RELEVANT ADDITIONAL INFORMATION AND REVISIONS, OTHER THAN THOSE REQUESTED BY ARCHITECT ON PREVIOUS SUBMITTALS. INDICATE BY HIGHLIGHTING ON EACH SUBMITTAL OR NOTING ON ATTACHED SEPARATE SHEET.

C. PDF SUBMITTALS PREPARE SUBMITTALS AS PDF PACKAGE, INCORPORATING COMPLETE INFORMATION INTO EACH PDF FILE. NAME PDF FILE WITH SUBMITTAL NUMBER.

D. PROCESSING TIME ALLOW TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS, AS FOLLOWS. TIME FOR REVIEW SHALL COMMENCE ON ARCHITECT'S RECEIPT OF SUBMITTAL. NO ETENSION OF THE CONTRACT TIME WILL BE AUTHORIED BECAUSE OF FAILURE TO TRANSMIT SUBMITTALS ENOUGH IN ADVANCE OF THE WORK TO PERMIT PROCESSING, INCLUDING RESUBMITTALS.

1. INITIAL REVIEW ALLOW10 DAYS FOR INITIAL REVIEW OF EACH SUBMITTAL. ALLOW ADDITIONAL TIME IF COORDINATION WITH SUBSEQUENT SUBMITTALS IS REQUIRED. ARCHITECT WILL ADVISE CONTRACTOR WHEN A SUBMITTAL BEING PROCESSED MUST BE DELAYED FOR COORDINATION.
2. RESUBMITTAL REVIEW ALLOW 10 DAYS FOR REVIEW OF EACH RESUBMITTAL.

E. RESUBMITTALS MAKE RESUBMITTALS IN SAME FORM AND NUMBER OF COPIES AS INITIAL SUBMITTAL.

F. USE FOR CONSTRUCTION RETAIN COMPLETE COPIES OF SUBMITTALS ON PROECT SITE. USE ONLY FINAL ACTION SUBMITTALS THAT ARE MARKED WITH APPROVAL NOTATION FROM ARCHITECT'S AND ENGINEER'S ACTION STAMP.

G. PRODUCT DATA COLLECT INFORMATION INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION AND TYPE OF PRODUCT OR EQUIPMENT.

1. IF INFORMATION MUST BE SPECIALLY PREPARED FOR SUBMITTAL BECAUSE STANDARD PUBLISHED DATA ARE UNSUITABLE FOR USE, SUBMIT AS SHOP DRAWINGS, NOT AS PRODUCT DATA.
2. MARK EACH COPY OF EACH SUBMITTAL TO SHOW WHICH PRODUCTS AND OPTIONS ARE APPLICABLE.
   INCLUDE THE FOLLOWING INFORMATION, AS APPLICABLE
   . MANUFACTURERS CATALOG CUTS.
   . MANUFACTURERS PRODUCT SPECIFICATIONS.
   . STANDARD COLOR CHARTS.
   d. STATEMENT OF COMPLIANCE WITH SPECIFIED REFERENCED STANDARDS.
   . TESTING BY RECOGNIED TESTING AGENCY.
   . APPLICATION OF TESTING AGENCY LABELS AND SEALS.
   g. NOTATION OF COORDINATION REQUIREMENTS.
   . AVAILABILITY AND DELIVERY TIME INFORMATION.

4. FOR EQUIPMENT, INCLUDE THE FOLLOWING IN ADDITION TO THE ABOVE, AS APPLICABLE
   . WIRING DIAGRAMS THAT SHOW FACTORY-INSTALLED WIRING.
   . PRINTED PERFORMANCE CURVES.
   . OPERATIONAL RANGE DIAGRAMS.
   d. CLEARANCES REQUIRED TO OTHER CONSTRUCTION, IF NOT INDICATED ON ACCOMPANYING SHOP DRAWINGS.

G. INCOMPLETE SUBMITTALS ARE UNACCEPTABLE, WILL BE CONSIDERED NONRESPONSIVE, AND WILL BE RETURNED FOR RESUBMITTAL WITHOUT REVIEW.

1.05 OPERATION AND MAINTENANCE MANUALS

A. UPON COMPLETION OF WORK, OPERATION AND MAINTENANCE OM MANUALS SHALL BE SUBMITTED FOR APPROVAL.O M MANUALS SHALL BE BOUND IN A HARD COVER RING BINDER AND LABELED WITH THE PROECT NAME. MANUALS SHALL INCLUDE NAME, ADDRESSES, AND PHONE NUMBERS OF THE CONTRACTORS FOR EACH DISCIPLINE AND THE APPROVED MANUFACTURERS LIST. THE MANUALS SHALL ALSO INCLUDE COPIES OF ALL APPROVED SHOP DRAWINGS AS WELL AS ALL APPLICABLE AND APPROPRIATELY EDITED MANUFACTURERS MAINTENANCE AND OPERATING INSTRUCTIONS.

1.06 RECORD DRAWINGS

A. WITHIN 60 DAYS AFTER THE DATE OF OCCUPANCY, PROVIDE RECORD OF DRAWINGS OF THE ACTUAL INSTALLATION TO THE OWNER. RECORD DRAWINGS SHALL INCLUDE AT MINIMUM DEVIATIONS FROM THE PLANS, THE LOCATION AND PERFORMANCE DATA OF EACH PIECE OF EQUIPMENT, AND THE GENERAL CONFIGURATION OF DUCT AND PIPING DISTRIBUTION SYSTEMS INCLUDING SIES.

15200 - PLUMBING

PART 1 GENERAL

1.01 SCOPE OF WORK

A. FURNISH ALL SUPERVISION, LABOR, MATERIALS, TOOLS AND EQUIPMENT AND INSTALL ALL MATERIALS REQUIRED TO PERFORM THE PLUMBING WORK AS SPECIFIED AND AS OTHERWISE INDICATED TO BE REQUIRED.

1.02 WORK INCLUDED

A. THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FURNISHING AND INSTALLATION OF THE FOLLOWING
1. DOMESTIC WATER SYSTEM INCLUDING PIPING, FITTINGS, PIPING HANGERS, SUPPORTS, ACCESSORIES, VALVES.
2. SANITARY DRAINAGE SYSTEM INCLUDING PIPING, FITTINGS, PIPING ACCESSORIES, HANGERS, SUPPORTS.
   . STORM WATER DRAINAGE SYSTEM INCLUDING PIPING, DRAINS, FITTINGS, PIPING ACCESSORIES, HANGERS SUPPORTS.
4. CUTTING AND PATCHING IN CONNECTION WITH THE WORK.
5. PIPE INSULATION WITH VAPOR BARRIER FOR THE PREVENTION OF CONDENSATION, AND FOR PERSONNEL PROTECTION.
6. TESTING, CLEANING, ADJUSTING, AND PLACING IN OPERATION ALL SYSTEMS AND EQUIPMENT SPECIFIED UNDER THIS SECTION OF THE SPECIFICATION.

1.0 RELATED WORK TO BE PERFORMED UNDER OTHER SECTIONS

A. ELECTRICAL POWER AND WIRING

1.04 CODES AND STANDARDS

A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING
1. PDI - PLUMBING AND DRAINAGE INSTITUTE
2. ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES

1.05 SUBMITTALS

A. SUBMIT FOR REVIEW AND APPROVAL, MANUFACTURERS CATALOGUE LITERATURE FOR ALL MAOR COMPONENTS CONTAINED IN THE PLUMBING WORK INCLUDING
1. INSULATION, HANGERS, SUPPORTS, ETC.
2. CLEANOUTS

1.06 PRODUCT HANDLING AND STORAGE

A. MATERIALS AND FITURES USED SHALL BE NEW, DAMAGE FREE AND SHALL BE PROPERLY STORED AND PROTECTED BY THE MANUFACTURERS RECOMMENDATION. THE CONTRACTOR SHALL STORE THE MATERIALS AND FITURES IN A PROTECTED AREA TO PREVENT DAMAGE, CORROSION, OR LOSS OF MATERIAL. THE CONTRACTOR SHALL INSPECT ALL MATERIALS AND FITURES UPON RECEIPT AND BEFORE INSTALLATION. ANY DAMAGED OR DEFECTIVE MATERIALS OR FITURES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER PRIOR TO INSTALLATION. DAMAGED OR DEFECTIVE MATERIALS OR FITURES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE OWNERS OPTION. THE CONTRACTOR WILL HANDLE ANY FREIGHT CLAIMS THAT MAY ARISE.

PART 2 PRODUCTS

2.01 GENERAL

A. THE PRODUCT MANUFACTURERS AND COMPONENT MODEL NUMBERS IN THE FOLLOWING PARAGRAPHS ARE GIVEN TO ESTABLISH A LEVEL OF QUALITY AND PERFORMANCE, AND THEY ARE NOT INTENDED TO ECLUDE EQUIVALENT PRODUCTS OF ALTERNATE MANUFACTURERS. ALTERNATE MANUFACTURERS OF EQUIVALENT PRODUCTS MAY BE CONSIDERED UPON SUBMISSION BY THE GENERAL CONTRACTOR AND APPROVAL BY THE OWNER.

2.02 PIPE AND FITTINGS

A. SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

B. SANITARY PIPING
1. SANITARY WASTE, DRAIN AND VENT PIPING SHALL BE SERVICE WEIGHT, CAST IRON, NO-HUB PIPE. PVC OR CPVC PIPE IS NOT ACCEPTABLE.
2. OINTS PROVIDE NEOPRENE SEALING SLEEVE WITH STAINLESS STEEL SHIELD AND CLAMP WITH APPROVED NEOPRENE BASED LUBRICANT.
   . SLOPE WASTE PIPING 2" AND SMALLER NOT LESS THAN 1/4" PER FOOT. SLOPE WASTE PIPING 2-1/2" AND LARGER NOT LESS THAN 1/8" PER FOOT.
4. INSTALL CLEANOUTS AS SHOWN ON THE DRAWINGS AND AS REQUIRED PER LOCAL CODE. PROVIDE COVERS WITH INSET AREA FOR CARPETED FLOOR LOCATIONS.

C. DOMESTIC WATER PIPING
1. PIPING SHALL BE THE FOLLOWING
   . COPPER TUBE AND FITTINGS TYPE L DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN ANTIMONY SOLDER.
2. PROVIDE AIR CHAMBER WATER HAMMER ARRESTORS IN THE PIPING SYSTEM TO PREVENT NOISE AND DAMAGE.

D. NATURAL GAS PIPING
1. PROVIDE SCHEDULE 40 BLACK STEEL PIPING WITH WROUGHT STEEL WELDING FITTINGS.
2. PROVIDE GAS PRESSURE REGULATOR SIMILAR TO MAITROL.

E. CONDENSATE DRAIN PIPING
1. PIPING PROVIDE TYPE L DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN ANTIMONY SOLDER OR SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS, BONDED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

2.0 EQUIPMENT

A. VALVES PROVIDE 125 SWP, BRONE VALVES BY NIBCO, CRANE, OR STOCKHAM
1. GATE VALVES 2-1/2" AND SMALLER SHALL BE SCREWED, TAPERED, SOLID WEDGE DISC, SCREWED BONNET, RISING STEM.
2. BALL VALVES 2-1/2" AND SMALLER SHALL BE 1/4 TURN SHUT OFF WITH TEFLON STEM SEALS AND SEAT, VINYL COVERED HANDLE.
   . CHECK VALVES 2-1/2" AND SMALLER SHALL BE SCREWED, HORIONTAL SWING CHECK WITH BRONE DISC.

B. CLEANOUTS
1. FLOOR CLEANOUTS SHALL BE R SMITH, OSAM OR URN EQUAL TO URN MODEL -1400. CLEANOUT SHALL BE ADUSTABLE CAST IRON WITH NICKEL BRONE TOP FLUSH WITH FLOOR.

C. BACKFLOW PREVENTERS
1. MANUFACTURERS SHALL BE AMES, WATTS, OR URN EQUAL TO AMES SERIES 2000B.
2. BACKFLOW PREVENTER SHALL BE DOUBLE CHECK VALVE TYPE MEETING ASSE 1015. BODY CONSTRUCTION SHALL BE BRONE WITH REPLACEABLE SEATS AND DISCS. MAIMUM PRESSURE LOSS SHALL BE 6 PSI.

D. FLOOR DRAINS
1. MANUFACTURERS SHALL BE .R. SMITH, OSAM, OR URN EQUAL TO OSAM SERIES 0000A.
2. FLOOR DRAINS SHALL BE CAST IRON BODY SHALLOW SUMP DRAIN WITH DOUBLE DRAINAGE FLANGE AND WEEPHOLES, FLASHING CLAMP, BOTTOM OUTLET WITH NEOPRENE GASKET INSIDE CONNECTOR, ADJUSTABLE ROUND STRAINER. FRAME AND STRAINER SHALL HAVE POLISHED NICKEL BRONE FINISH.

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E. FLOOR SINKS
1. MANUFACTURERS SHALL BE .R. SMITH, OSAM OR URN EQUAL TO OSAM SERIES4900.
2. FLOOR SINKS SHALL BE SQUARE CAST IRON 5-7/8" DEEP WITH ACID-RESISTING INTERIOR, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER AND CAST IRON, NON-TRAFFIC, ACID-RESISTING, ANTI-TILTING GRATE.

F. TRAP SEAL PRIMER VALVE
1. MANUFACTURERS SHALL BE OSAM, .R. SMITH, OR URN EQUAL TO OSAM SERIES 88250.
2. PROVIDE ALL BRONE PRIMER VALVE WITH REMOVABLE OPERATING PARTS, INTEGRAL VACUUM BREAKER, AND GASKETED ACCESS COVER FOR ACCESS.
   . INSTALL VALVE IN COLD WATER LINE TO PLUMBING FITURE AND CONNECT TO FLOOR DRAIN AS INDICATED ON THE DRAWINGS.

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G. DOMESTIC WATER PUMPS
1. MANUFACTURER SHALL BE BELL GOSSETT, TACO, OR ARMSTRONG EQUAL TO BELL GOSSETT SERIES PL.
2. PUMP SHALL BE PERMANENTLY LUBRICATED INLINE WITH CAST IRON BODY, CARBON STEEL SHAFT, MECHANICAL SEAL, PERMANENTLY LUBRICATED STEEL BALL BEARINGS.

H. WATER HAMMER ARRESTER
1. MANUFACTURERS SHALL BE OSAM, .R. SMITH, OR URN EQUAL TO OSAM SERIES 75000.
2. PROVIDE METAL BELLOWS TYPE MEETING PDI-WH-201. WATER HAMMER ARRESTER SHALL HAVE STAINLESS STEEL SHELL, STAINLESS STEEL BELLOWS, AND PRESSURIED NITROGEN COMPRESSION CHAMBER.

I. GAS-FIRED, TANKLESS, DOMESTIC WATER HEATERS
1. PROVIDE CONDENSING, TANKLESS, TEMPERATURE CONTROLLED, CONTINUOUS FLOW WATER HEATER. PROVIDE BASIS-OF-DESIGN PRODUCT INDICATED ON DRAWINGS OR COMPARABLE PRODUCT BY AO SMITH, BRADFORD-WHITE, RINNAI, OR STATE INDUSTRIES.
2. STANDARD ANSI 21.10./CSA 4. FOR GAS-FIRED, INSTANTANEOUS, DOMESTIC-WATER HEATERS FOR INDOOR APPLICATION.
   . CONSTRUCTION COPPER PIPING OR TUBING COMPLYING WITH NSF 61 ANNE G BARRIER MATERIALS FOR POTABLE WATER, WITHOUT STORAGE CAPACITY.
   . TAPPINGS ASME B1.20.1 PIPE THREAD.
   . PRESSURE RATING 150 PSIG.
   . HEAT ECHANGER COPPER TUBING.
   d. INSULATION COMPLY WITH ASHRAE/IESNA 90.1.
   . ACKET METAL, WITH ENAMELED FINISH, OR PLASTIC.
   . BURNER FOR USE WITH TANKLESS, DOMESTIC-WATER HEATERS AND NATURAL-GAS FUEL.
   g. AUTOMATIC IGNITION MANUFACTURERS PROPRIETARY SYSTEM FOR AUTOMATIC, GAS IGNITION.
   . TEMPERATURE CONTROL ADUSTABLE THERMOSTAT.
4. SUPPORT BRACKET FOR WALL MOUNTING.

. THERMOSTATIC MIING VALVES, TMV-1

1. MANUFACTURERS SHALL BE LAWLER, LEONARD, OR POWERS EQUAL TO LAWLER SERIES 61.
2. PROVIDE MASTER WATER MIING VALVE WITH BRONE BODY, REPLACEABLE CORROSION RESISTANT COMPONENTS. VALVE SHALL HAVE SLIDING PISTON CONTROL MECHANISM. PISTON AND LINER SHALL BE STAINLESS STEEL. VALVE SHALL INCLUDE UNION END STOP AND CHECK INLETS WITH REMOVABLE STAINLESS STEEL STRAINERS. PROVIDE WITH THERMOMETER AND SHUTOFF VALVE ON OUTLET.
   . MIING VALVE SHALL MEET ASSE 1017.

K. THERMOSTATIC MIING VALVES, TMV-2

1. MANUFACTURERS SHALL BE LAWLER, LEONARD, OR POWERS EQUAL TO LAWLER MODEL 570.
2. THE POINT OF USE MASTER CONTROLLER VALVE SHALL BE A NICKEL PLATED THERMOSTATIC MIING VALVE. VALVE SHALL HAVE A SPINDLE TO ADUST OUTLET TEMPERATURE. VALVE SHALL HAVE INTERNAL CHECKS. PROVIDE WITH THERMOMETER AND SHUTOFF VALVE ON OUTLET.
   . MIING VALVE SHALL MEET ASSE 1070.

L. BRONE PLUG VALVES

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1. MANUFACTURERS SHALL BE A.Y. MCDONALD OR LEE BRASS COMPANY.
2. PLUG VALVES SHALL BE BRONE BODY WITH BRONE PLUG, SQUARE HEAD OPERATOR, SUITABLE FOR NATURAL GAS SERVICEWITH "WOG" INDICATED ON VALVE BODY.

2.04 PLUMBING FITURES

A. WATER CLOSET, 806
1. MANUFACTURER SHALL BE AMERICAN STANDARD, CRANE, OR KOHLER EQUAL TO AMERICAN STANDARD MADERA FLOWISE 15" HEIGHT
2. FITURE SHALL BE VITREOUS CHINA, FLOOR MOUNTED FLUSHOMETER VALVE TOILET, ELONGATED BOWL 1.28 GPF CONSUMPTION POWERFUL DIRECT-FED SIPHON ET ACTION MOUNTING HEIGHT 15" TO RIM.
   . FLUSH VALVE SHALL BE SLOAN VALVE COMPANY, URN INDUSTRIES, OR AMERICAN STANDARD EQUAL TO AMERICAN STANDARD MODEL 6065.121.002.
4. SEAT SHALL BE CHURCH SEATS, BEMIS MANUFACTURING, OR AMERICAN STANDARD EQUAL TO AMERICAN STANDARD 5901.100.

B. WATER CLOSET, 806A
1. MANUFACTURER SHALL BE AMERICAN STANDARD, CRANE, OR KOHLER EQUAL TO AMERICAN STANDARD RIGHT WIDTH FLOWISE ELONGATED RIGHT HEIGHT FLUSHOMETER TOILET. INCLUSIVE OF ELONGATED, OPEN FRONT, RIGHT WIDTH SEAT.
2. FITURE SHALL BE VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL 1.28 GPF CONSUMPTION POWERFUL DIRECT-FED SIPHON ET ACTION MOUNTING HEIGHT 17" TO RIM.
   . FLUSH VALVE SHALL BE SLOAN VALVE COMPANY, URN INDUSTRIES, OR AMERICAN STANDARD EQUAL TO AMERICAN STANDARD MODEL 6065.121.002.

C. LAVATORY, 805
1. MANUFACTURER SHALL BE AMERICAN STANDARD, CRANE, OR KOHLER EQUAL TO AMERICAN STANDARD MODEL 0495.221.
2. FITURE SHALL BE VITREOUS CHINA, OVAL UNDERMOUNT 4" CENTERS BOWL SIE 15-1/16" WIDE, 12-1/16" FRONT TO BACK, 5-1/2" DEEP.
   . FAUCET SHALL BE CHICAGO FAUCETS, DELTA, OR SLOAN EQUAL TO SLOAN MODEL ETF-80 ADA COMPLIANT, SENSOR ACTIVATED, VANDAL RESISTANT SPRAY HEAD WITH PRESSURE COMPENSATING FLOW CONTROL, 0.5 GPM.

D. MOP BASIN, 604
1. MANUFACTURER SHALL BE CRANE PLUMBING, FIAT PRODUCTS, OR FLORESTONE PRODUCTS EQUAL TO FIAT MODEL MSB 2424.
2. FITURE SHALL BE MOLDED STONE MOP BASIN WITH OVERALL DIMENSIONS OF 24"24"10" DRAIN PIPE SIE ".
   . FAUCET SHALL BE CHICAGO FACUETS, DELTA FAUCETS, OR FIAT PRODUCTS EQUAL TO FIAT MODEL 80-AA CHROME PLATED WITH VACUUM BREAKER, INTEGRAL STOPS, ADUSTABLE WALL BRACE, PAIL HOOK AND HOSE THREAD ON SPOUT.

2.05 INSULATION

A. PIPE INSULATION SHALL BE MOLDED GLASS FIBER, WITH A -1/2 LB/CU. FT. DENSITY AND A K FACTOR OF 0.023 AT 75° F, EQUAL TO JOHNS-MANVILLE "FLAME-SAFE AP-T".
1. FLEIBLE CLOSED CELL ELASTOMERIC TUBULAR INSULATION EQUAL TO ARMAFLE. ARMACELL MAY BE USED FOR DOMESTIC WATER PIPING.

B. FITTINGS AND VALVES SHALL BE COVERED WITH FIBERGLASS INSERT AND PRE-MOLDED PVC COVERS SIMILAR TO OHNS-MANVILLE "ESTON".

C. PIPE INSULATION SCHEDULE, GENERAL
1. ITEMS NOT INSULATED UNLESS OTHERWISE INDICATED, DO NOT INSTALL INSULATION ON THE FOLLOWING
   . CPVC DOMESTIC WATER PIPING.
   . DRAINAGE PIPING LOCATED IN CRAWL SPACES.
   . UNDERGROUND PIPING.
   d. CHROME-PLATED PIPES AND FITTINGS UNLESS THERE IS A POTENTIAL FOR PERSONNEL INURY.

D. INDOOR PIPING INSULATION SCHEDULE
1. DOMESTIC COLD WATER - 1/2" THICKNESS
2. DOMESTIC HOT WATER - 1/2" THICKNESS

E. SUPPLIES AND TRAPS ON HANDICAPPED LAVATORIES SHALL BE INSULATED WITH PRE-MOLDED INSULATION KITS AS MANUFACTURED BY MCGUIRE, TRUEBRO, OR URN.

2.06 IDENTIFICATION

A. PROVIDE PREPRINTED FLEIBLE VINYL LABELS WITH PERMANENT PRESSURE SENSITIVE ADHESIVE BACK. LABEL SHALL ENCIRCLE THE PIPE AND INSULATION AND OVERLAP ON ITSELF AND SHALL HAVE AT LEAST ONE FLOW DIRECTION ARROW AND SHALL BE PERMANENTLY LABELED WITH PIPE CONTENT.

B. LABELS SHALL BE BY BRADY, CRAFTMARK, OR SETON.

C. IDENTIFY PIPE LINES WITH COLOR CODED BANDS AT THE FOLLOWING LOCATIONS
1. AT EQUIPMENT CONNECTION AT EACH VALVE.
2. AT BOTH SIDES OF WALLS THROUGH WHICH PIPE PASSES.
   . AT 20 FT. INTERVALS ON CONTINUOUS PIPE RUNS.
4. AT EACH BRANCH CONNECTION.

D. TAG ALL VALVES AND SPECIALITIES WITH A NUMBER. PROVIDE A VALVE SCHEDULE WITH THE NUMBER, LOCATION AND PURPOSE OF EACH VALVE AND INCLUDE IN OPERATION AND MAINTENANCE MANUAL.

PART EECUTION

.01 GENERAL

A. ALL EQUIPMENT AND SYSTEMS DESIGNS, INSTALLATIONS AND TESTING SHALL BE IN CONFORMANCE WITH NFPA, AGA, MANUFACTURERS RECOMMENDATIONS, STATE AND LOCAL CODES AND ORDINANCES.

B. ALL PLUMBING WORK SHALL BE INSTALLED IN COMPLETE CONFORMITY WITH APPLICABLE PORTIONS OF LOCAL ORDINANCES, PLUMBING CODES, PUBLIC UTILITIES, STATE CODES, ASME CODE AND AGA REQUIREMENTS.

C. THE PLUMBING CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY ALL FEES REQUIRED, AND ARRANGE FOR ALL INSPECTIONS IN CONNECTION WITH THIS WORK.

D. INSTALLATION OF THE PLUMBING WORK SHALL BE INSPECTED AND APPROVED BY THE APPLICABLE LOCAL AUTHORITIES AS WORK PROGRESSES.

E. ALL PIPING SHALL BE LABELED AS TO SERVICE PROVIDED AND DIRECTION OF FLOW. PIPING SERVING SPECIFIC TENANTS SHALL HAVE THE TENANT SPACE NUMBER INDICATED ON THE LABEL.

F. ALL PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE WHILE MAINTAINING CODE REQUIRED SLOPES. ALL PIPING TO BE SUSPENDED FROM TOP CHORD OF OISTS.

G. EPOSED PIPING SHALL BE NEAT AND CAREFULLY ALIGNED WITH STRUCTURAL ELEMENTS OF THE BUILDING. NO OFFSETS OR OBLIQUE BENDS WILL BE PERMITTED. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE USED FOR LAYOUT WORK.

H. PIPE SHALL BE LOCATED A SUFFICIENT DISTANCE FROM WALLS, OTHER PIPES, DUCTWORK, CONDUITS, AND EQUIPMENT TO AVOID INTERFERENCE AND TO PERMIT THE APPLICATION OF FULL THICKNESS OF INSULATION SPECIFIED.

I. PROVIDE THERMOMETERS AND WELL IN THE PIPING LEAVING WATER HEATERS FOR MEASURING LEAVING WATER TEMPERATURE.

.02 DOMESTIC WATER SYSTEM

A. DOMESTIC WATER SYSTEM SHALL BE INSTALLED TO PROVIDE POTABLE WATER TO ALL PLUMBING FITURES AT ADEQUATE PRESSURE FOR PROPER OPERATION.

B. ALL CAPPED SERVICES FOR FUTURE USE SHALL BE PROVIDED WITH INDIVIDUAL ISOLATION VALVES. EPOSED PIPING AND ACCESSORIES AT FITURES AND IN FINISHED AREAS SHALL BE CHROME PLATED.

C. EACH DOMESTIC HOT AND COLD WATER BRANCH SHALL BE PROVIDED WITH SHUT-OFF GATE VALVE AND EACH FITURE SHALL BE PROVIDED WITH A STOP VALVE.

D. DISINFECTING WATER PIPES
1. FLUSH PIPING SYSTEM WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT OUTLETS.
2. DISINFECT THE ENTIRE WATER SUPPLY SYSTEM, FILLING WITH A SOLUTION OF 50 PPM OF CHLORINE AND ALLOW TO STAND TWENTY FOUR HOURS BEFORE FLUSHING AND RETURNING TO SERVICE.
   . FLUSH SYSTEM WITH CLEAN, POTABLE WATER UNTIL NO CHLORINE IS IN WATER COMING FROM SYSTEM AFTER THE STANDING TIME.

.0 SANITARY DRAINAGE SYSTEM

A. SANITARY DRAINAGE SHALL BE COLLECTED FROM PLUMBING FITURES-AND ETENDED BY GRAVITY AND CONNECTED TO THE BUILDING DRAIN SYSTEM.

B. SYSTEM SHALL BE PROPERLY VENTED IN ACCORDANCE WITH CODE REQUIREMENTS TO PREVENT ECESSIVE BACK PRESSURE. VENTS SHALL ETEND UNDIMINISHED THROUGH ROOF VENT FLASHING SHALL BE BY THE ROOFING CONTRACTOR.

.04 NATURAL GAS PIPING

A. TEST, INSPECT AND PURGE NATURAL GAS PIPING IN ACCORDANCE WITH THE INTERNATIONAL FUEL GAS CODE AND AUTHORITIES HAVING URISDICTION.

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STORE #079
QUARTERFIELD RD - SEVERN, MD

REV. #	ISSUE / DESCRIPTION	DATE
1	OWNER COMMENTS	05/10/17

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PLUMBING SPECIFICATIONS

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