

PLUMBING SPECIFICATIONS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

- A. THE LATEST EDITION OF AIA DOCUMENTS 201 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, OR AS REQUIRED BY THE ARCHITECTURAL DOCUMENTS AND/OR THE STRUCTURAL ENGINEERS DOCUMENTS ARE PART OF THE CONTRACT.
- B. PROVIDE ALL PLUMBING WORK SHOWN ON THE CONTRACT DOCUMENTS. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE UNIFORM CONSTRUCTION CODE (NAC 5.23), 2015 INTERNATIONAL BUILDING CODE AS ADOPTED BY NEW JERSEY, 2015 NATIONAL STANDARD PLUMBING CODE, 2015 INTERNATIONAL FUEL GAS CODE AS ADOPTED BY NEW JERSEY, LANDLORDS BUILDING STANDARDS, AND ALL AUTHORITIES HAVING JURISDICTION (AND APPLICABLE NATIONAL, STATE AND LOCAL CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK SHALL BE INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS.
- C. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THIS WORK. FINAL ACCEPTANCE SHALL BE DEFINED AS THE TIME AT WHICH THE PLUMBING WORK IS TAKEN OVER AND ACCEPTED BY THE OWNER. ENGAGE THE SERVICES OF VARIOUS MANUFACTURERS SUPPLYING THE EQUIPMENT FOR THE PROPER STARTUP, OPERATION AND TRAINING OF ALL SYSTEMS INSTALLED. INSTRUCT THE OWNERS PERSONNEL IN THE PROPER OPERATION AND SERVICING OF THE EQUIPMENT.
- D. BIDDERS SHALL VISIT AND CAREFULLY EXAMINE THE AREA PERTAINING BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THIS WORK BEFORE SUBMITTING PROPOSALS. EXAMINE THE CONTRACT DOCUMENTS OF THIS TRADE AND ALL OTHER TRADES FOR THIS PROJECT. VISIT ALL EXISTING CONDITIONS AT THE SITE, AND BECOME FULLY INFORMED AS TO THE EXTENT AND CHARACTER OF THE WORK IN THE BUILDING. SUBMISSION OF A PROPOSAL, WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BID. IF DISCREPANCIES ARE NOT RESOLVED TO CONTRACTORS SATISFACTION THEY SHALL BE QUALIFIED IN THEIR BID SUBMISSION.
- E. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN CONTRACT. IT IS NOT INTENDED TO SPECIFY OR TO SHOW EVERY FITTING, PIPE, OR COMPONENT. HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFIED NECESSARY TO MAKE THE INSTALLATION COMPLETE AND OPERATIONAL. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT. THE CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE OWNER, MAKE ALL REASONABLE MODIFICATIONS IN THE WORK AS MAY BE REQUIRED TO PREVENT CONFLICT WITH THE WORK OF OTHER TRADES, OR FOR THE PROPER INSTALLATION OF THE WORK.
- F. INTERRUPTION OF EXISTING BUILDING SERVICES IN ORDER TO CONNECT NEW PIPING TO EXISTING SHALL BE MADE AT SUCH TIME AS TO CAUSE THE LEAST INTERFERENCE WITH ESTABLISHED BUILDING OPERATING PROCEDURE. ALL EXISTING SERVICE SHUTDOWNS SHALL BE SUPERVISED AND DIRECTED BY BUILDING MANAGEMENT. THE CONTRACTOR SHALL SHOW NOTICE 48 HOURS PRIOR TO ANY SHUTDOWN.
- G. ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE DRAWINGS, ANY EQUIPMENT, MATERIALS, ACCESSORIES, OR LABOR REQUIRED FOR A CODE COMPLIANT AND COMPLETE INSTALLATION OF THE PLUMBING WORK SHALL BE FURNISHED AND INSTALLED AS PART OF THE ORIGINAL BID.
- H. PATCH AND/OR REPLACE DAMAGED ARCHITECTURAL COMPONENTS AS A RESULT OF PLUMBING SYSTEMS INSTALLATION. CLEAN UP THE CONSTRUCTION SITE DAILY DURING CONSTRUCTION AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES, AND AFTER THE COMPLETION OF INSTALLATION AND TESTING.
- I. ALL NECESSARY CUTTING AND PATCHING IN FLOOR SLABS, ROOF SLABS, WALLS, AND CEILING FOR THE PLUMBING WORK SHALL BE PERFORMED BY THE CONTRACTOR. RESTORE TO MATCH EXISTING CONDITIONS.
- J. REMOVE TEMPORARY CONNECTIONS AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE INSTALLATION OF THE NEW SYSTEMS. ALL EXISTING CONDITIONS ARE NOT COMPLETELY DETAIL ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED BASED ON EXISTING CONDITIONS FOR PROPER INSTALLATION OF NEW WORK.
- K. ALL EQUIPMENT INSTALLED OR CONNECTED INTO THE BUILDING STACKS, RISERS, PLUMBING SYSTEMS AND INFRASTRUCTURE SHALL BE PROVIDED IN ADVANCE BY THE BUILDING PRIOR TO INSTALLATION. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING PIPING TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING MANAGEMENT.
- L. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE AND SERVICE THE ENTIRE INSTALLATION FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE OF THE INSTALLATION. THE CONTRACTOR SHALL, DURING THE PERIOD OF THE GUARANTEE, REPLACE OR REPAIR AT HIS OWN EXPENSE ANY PIECE OF EQUIPMENT AND/OR MATERIAL WHICH IS FOUND TO BE DEFECTIVE, THE REPLACEMENT OR REPAIR SHALL BE PERFORMED THE SAME DAY OF NOTIFICATION IN AN EMERGENCY FASHION WHEN NOTIFIED BY THE OWNER OR AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL ALSO REPAIR ALL DAMAGE TO SURROUNDING WORK CAUSED BY THE FAILURE, REPAIR OR REPLACEMENT OF DEFECTIVE EQUIPMENT. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS DEMONSTRATED THAT HIS WORK FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATION, AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVALS.

1.02 SCOPE OF WORK

- A. THE CONTRACTOR SHALL FURNISH AND INSTALL PLUMBING WORK COMPLETE WITH ALL EQUIPMENT, FIXTURES, PIPING, VALVES, AND ACCESSORIES AND ASSOCIATED WORK IN ACCORDANCE ALL NATIONAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, BUILDING MANAGEMENT, DESIGN DRAWINGS AND THIS SPECIFICATION. THE SCOPE OF WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 1. *ADD IF REQUIRED- DISCONNECT AND REMOVE PLUMBING EQUIPMENT, FIXTURES, PIPING AND SUPPORTS. REMOVE PIPING BACK TO EXISTING STACKS AND RISERS AND CAP.
 2. FURNISH AND INSTALL NEW FIXTURES, PIPING, VALVES, SUPPORTS, SEISMIC BRACING AND RELATED EQUIPMENT. MAKE ALL REQUIRED PLUMBING CONNECTIONS TO APPLIANCES OR EQUIPMENT FURNISHED BY OTHERS.
 3. PREPARE AND SUBMIT AS-BUILT DRAWINGS INDICATING ACTUAL LOCATIONS OF EQUIPMENT, PIPING, AND VALVES. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER UPON COMPLETION OF INSTALLATION AND TESTING. SUBMIT DIGITAL COPIES IN PDF FORMAT AND DWG AUTOCAD FORMAT.
 4. PERFORM CUTTING, CORING, AND ROUGH PATCHING REQUIRED TO ACCOMMODATE PLUMBING INSTALLATION.
 5. PERFORM MAINTENANCE AND PROPER OPERATION OF EXISTING BASE BUILDING SYSTEMS WITHIN THE CONTRACT AREA IN ACCORDANCE WITH THE REQUIREMENTS OF BUILDING MANAGEMENT.
 6. PROVIDE INSULATION OF PIPING, FITTINGS, VALVES. PROVIDE PIPING SYSTEMS IDENTIFICATION. PROVIDE VALVE TAGS AND CHART.
 7. COORDINATION WITH WORK OF OTHER TRADES.
 8. SCAFFOLDING AND RIGGING.
 9. TESTING AS REQUIRED BY APPLICABLE CODES AND STANDARDS.
 10. SECURING OF ALL PERMITS AND APPROVALS AND PAYMENT OF FEES.

1.03 SHOP DRAWINGS, EQUIPMENT SUBMISSION, MAINTENANCE MANUALS.

- A. SUBMIT ONE (1) PRINT OF THE PLUMBING PIPING LAYOUT, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT MANUFACTURERS CATALOG CUTS OF THE FOLLOWING:
 1. PIPING AND FITTINGS
 2. INSULATION
 3. FIXTURES, SUPPORTS, TRIM
 4. VALVES
 5. VALVE TAGS AND CHART
 6. BACKFLOW PREVENTION DEVICES
 7. HANGERS AND SUPPORTS, SEISMIC SUPPORTS
 8. FLOOR DRAINS, FLOOR SINKS, FUNNEL DRAINS, CLEANOUTS
 9. ROOF DRAINS, OVERFLOW ROOF DRAINS
 10. HOSE BIBBS.
 11. ESCUTCHEONS AND SLEEVES
 12. WATER HEATER(S)
 13. LEAK DETECTION SYSTEM
 14. WATER METERS
 15. HOT WATER TEMPERATURE MAINTENANCE TABLE
 16. OPERATION AND MAINTENANCE MANUALS
 17. MANUFACTURERS CATALOG CUTS OF ALL EQUIPMENT

1.04 SUBSTITUTIONS

- A. NO SUBSTITUTE MATERIAL, OR MANUFACTURER OF EQUIPMENT SHALL BE PERMITTED WITHOUT A FORMAL WRITTEN SUBMITTAL TO THE ENGINEER WHICH INCLUDES ALL DIMENSIONAL, PERFORMANCE AND MATERIAL SPECIFICATIONS. ANY CHANGES IN LAYOUT, STRUCTURAL REQUIREMENTS, OR DESIGN DUE TO THE USE OF A SUBSTITUTION SHALL BE SUBMITTED TO THE ENGINEER AS PART OF THIS PROPOSAL. THE CONTRACTOR TAKES FULL RESPONSIBILITY FOR THE SUBSTITUTION AND ALL CHANGES RESULTING FROM SUBSTITUTION. ALL ITEMS SHALL BE SUBMITTED FOR REVIEW IN

CONJUNCTION WITH THE SUBMITTAL OF THE ALTERNATE. ANY SUBSTITUTION MUST BE SUBMITTED WITH AN EXPLANATION WHY SUBSTITUTION IS BEING UTILIZED. IF THE SUBSTITUTED ITEM DEVIATES FROM THE SPECIFIED ITEM, THOSE DEVIATIONS ARE TO BE IDENTIFIED ON A LINE BY LINE BASIS. IF THE SUBSTITUTION IS BEING UTILIZED FOR FINANCIAL REASONS, THE ASSOCIATED CREDIT MUST BE SIMULTANEOUSLY SUBMITTED.

- B. ALL SUBSTITUTED MATERIAL SHALL CONFORM TO SPACE REQUIREMENTS AND PERFORMANCE REQUIREMENTS SHOWN ON CONTRACT DOCUMENTS.
- C. CONTRACTOR SHALL SUBMIT HIS BID BASED ON THE SPECIFIED ITEMS AND SHALL SUPPLY AS AN ADD OR DEDUCT ALTERNATE PRICE FOR ANY SUBSTITUTIONS.

1.05 QUALITY ASSURANCE

- A. ALL PIPES SHALL BE MARKED TO INDICATE MANUFACTURER AND ASTM STANDARD. EACH FULL PIPE LENGTH SHALL HAVE THE MANUFACTURERS NAME CAST, STAMPED OR ROLLED ON.
- B. EACH FITTING SHALL HAVE THE MANUFACTURERS SYMBOL & PRESSURE RATING CAST, STAMPED OR ROLLED ON.
- C. ALL NEW COMPONENTS OF THE PLUMBING SYSTEM MUST CONFORM TO LOCAL AND STATE BUILDING AND PLUMBING CODES AND BUILDING STANDARDS.

1.06 COORDINATION WITH BUILDING MANAGEMENT

- A. THE PLUMBING CONTRACTOR IS TO OBTAIN A COPY OF THE BUILDING RULES AND REGULATIONS FOR TENANT ALTERATIONS PRIOR TO BID SUBMISSION IN ORDER TO DETERMINE THE BUILDING MANagements MINIMUM MATERIAL REQUIREMENTS AND THE EXTENT OF WORK REQUIRED TO BE PERFORMED ON PREMISE TIME, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 1. SHUT DOWNS OF BUILDING SERVICES
 2. NOISY WORK, INCLUDING CORE DRILLING
 3. WORK IN OTHER TENANTS SPACES
- B. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ADHERING TO THE BUILDING OWNERS RULES AND REGULATIONS. ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND THE BUILDINGS RULES AND REGULATIONS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER WITH THE BID FOR REVIEW.
- C. PRIOR TO THE START OF ANY BUILDING PLUMBING SYSTEM MODIFICATIONS, THE PROPERTY MANAGER SHALL BE PROVIDED WITH A MINIMUM OF 24 HOURS NOTICE IN ORDER INTERRUPTION OF EXISTING BUILDING SERVICES IN ORDER TO CONNECT NEW PIPING TO EXISTING SHALL BE MADE AT SUCH TIME AS TO CAUSE THE LEAST INTERFERENCE WITH ESTABLISHED BUILDING OPERATING PROCEDURE. THE CONTRACTOR SHALL NOT INTERRUPT THE SERVICE WITHOUT WRITTEN PERMISSION OF BUILDING MANAGEMENT.
- D. DURING THE PROJECT DURATION, THE BUILDING MANAGEMENT OFFICE AND ITS DESIGNATED REPRESENTATIVE SHALL BE ABLE TO INSPECT THE WORK IN PROGRESS. ANY WORK WHICH THE BUILDING MANAGEMENT DEEMS UNACCEPTABLE SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF CONTRACTOR/TEAM.

1.07 AS-BUILT DRAWINGS

- A. CONTRACTOR SHALL MAINTAIN RECORD DRAWING PRINTS ON JOB SITE AND RECORD, AT TIME OF OCCURRENCE, DEVIATIONS FROM CONTRACT DOCUMENTS.
- B. AT THE COMPLETION OF WORK AND BEFORE FINAL ACCEPTANCE, PROVIDE AS-BUILT DRAWINGS OF THE INSTALLATION IN A-DWG AND CAD 2014 OR NEWER. AN ELECTRONIC COPY (AUTOCAD FORMAT) OF ALL PLUMBING DRAWINGS WILL BE PROVIDED TO THE PLUMBING CONTRACTOR BY THE CONSULTANT AT NO COST. (ARCHITECTURAL DRAWINGS IN AUTOCAD FORMAT MUST BE OBTAINED FROM THE ARCHITECT). THE DRAWINGS WILL REFLECT THE BID AND/OR CONSTRUCTION SET OF DRAWINGS. SHOULD THE CONTRACTOR REQUIRE ADDITIONAL ELECTRONIC COPIES DURING CONSTRUCTION, A COST OF \$250.00 PER DRAWING WILL BE CHARGED BY THE CONSULTANT.
- C. CLEARLY INDICATE THE WORDS "AS-BUILT" IN THE TITLE BLOCK COLUMN OF THE DRAWINGS AS WELL AS THE PLUMBING CONTRACTORS NAME AND ADDRESS.
- D. SUBMIT A SINGLE PRINT TO CONSULTANT FOR REVIEW, WHEN FOUND ACCEPTABLE BY THE CONSULTANT. SUBMIT THREE SETS OF PRINTS TOGETHER WITH THE CAD DISK FOR PRESENTATION TO THE LANDLORD AND TENANT.

1.08 OPERATION AND MAINTENANCE MANUALS

- A. PROVIDE TWO SETS OF OPERATION AND MAINTENANCE MANUALS OF ALL PLUMBING EQUIPMENT SUBMITTED IN HARD COVER 3RING BINDERS. INCLUDE THE FOLLOWING INFORMATION IN THE OPERATIONS AND MAINTENANCE MANUALS:
 1. NAMES AND ADDRESS OF LOCAL SUPPLIERS FOR THE ITEMS INCLUDED.
 2. TECHNICAL DATA, PRODUCT DATA, SUPPLEMENTED BY BULLETS, COMPONENT ILLUSTRATIONS, EXPLODED VIEWS, TECHNICAL DESCRIPTIONS OF ITEMS, AND PARTS LISTS. ADVERTISING OR SALES LITERATURE IS NOT ACCEPTABLE.
 3. THE CONSULTANTS REVIEWED SHOP DRAWINGS.
 4. CERTIFICATE(S) OF ACCEPTANCE FROM THE AUTHORITIES INSPECTION DEPARTMENT.
- B. REVIEW INFORMATION PROVIDED IN THE MAINTENANCE INSTRUCTIONS AND MANUALS WITH THE TENANTS OPERATING PERSONNEL AND LANDLORDS OPERATING PERSONNELS, WHERE BASE BUILDING CONSTRUCTION SCHEDULE AND COORDINATE WITH WORK OF OTHER CONTRACTORS EQUIPMENT AND SYSTEMS AND THEIR OPERATION.

1.09 MATERIALS AND EQUIPMENT

- A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND MANUFACTURED TO THE STANDARDS SPECIFIED.

1.10 INSURANCE

- A. PROVIDE AND MAINTAIN INSURANCE TO PROTECT THE LANDLORD, TENANT AND TRADES FROM ALL POSSIBLE CLAIMS. SUBMIT WITH BID FOR AN AMOUNT ACCEPTABLE TO LANDLORD AND TENANT.

1.11 CONTRACT DOCUMENTS

- A. THE DRAWINGS FOR THE PLUMBING WORK ARE DIAGRAMMATIC PERFORMANCE DRAWINGS ONLY, INTENDED TO COMPLY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT AND APPROXIMATE SIZE AND LOCATION OF PLUMBING AND EQUIPMENT. THE DRAWINGS DO NOT INTEND TO SHOW ARCHITECTURAL, INTERIOR DESIGN, MECHANICAL, STRUCTURAL, OR BASE BUILDING DETAILS. CONTRACTOR IS TO BE RESPONSIBLE FOR A THOROUGH KNOWLEDGE OF SAME BEFORE PROCEEDING WITH THE WORK.
- B. DO NOT SCALE OR MEASURE DRAWINGS, BUT OBTAIN INFORMATION REGARDING ACCURATE DIMENSIONS FROM THE DIMENSIONS SHOWN ON THE DESIGN CONSULTANT/ARCHITECTS DRAWINGS, OR BY SITE MEASUREMENTS.
- C. CHECK VALVES - 2" AND SMALLER, LEAD-FREE BRONZE, Y-PATTERN, HORIZONTAL SWING, WITH RENEWABLE SEAT AND DISC. 200 PSI CWP NON-SHOOK, NSFANSI61-8, NIBCO 1413-Y-FLF FOR THREADED ENDS OR 11-1/2 LF FOR SOLDER ENDS.
- D. CHECK VALVES - 2 1/2" & 3": LOW LEAD, BRONZE BODY, SWING CHECK VALVE, 200 PSIG, NON-SHOOK, ASME B16.1, MILWAUKEE USP8F FOR THREADED ENDS, USP68 FOR SOLDERED ENDS.
- E. CHECK VALVES ON PUMP DISCHARGE, SILENT CHECK VALVE, FLANGED, CLASS 125, STAINLESS STEEL, SPRING & SCREWS, CAST IRON BODY, MILWAUKEE MODEL 1800.
- F. SOLENOID VALVE - DE-ENERGIZED CLOSED, ASCO MODEL #82100003, 120 V., WITH BRONZE BODY.
- G. PRESSURE REDUCING VALVE - 1/2" to 2", LEAD FREE, ASSE 1000 LISTED, DIRECT ACTING PRESSURE REDUCING VALVE WITH STRAINER, VALVE SHALL BE WATTS SERIES 12225.
- H. PRESSURE REDUCING VALVE - 2" AND 1", LEAD FREE, ASSE 1000 LISTED, DIRECT ACTING PRESSURE REDUCING VALVE WITH STRAINER, VALVE SHALL BE WATTS SERIES 12226S.

1.12 CORE DRILLING

- A. BEFORE CORE DRILLING FLOOR SLAB OR STRUCTURAL WALLS, X-RAY SLABS OR WALLS AND HAVE THE LOCATIONS APPROVED BY THE LANDLORD IN WRITING.
- B. ANY EXISTING BUILDING SERVICE DAMAGED BY CORE DRILLING SHALL BE REPAIRED IMMEDIATELY AT NO COST TO LANDLORD OR TENANT.
- C. FLOOR DRILLING TO BE PERFORMED AFTER NORMAL WORKING HOURS AND AT A TIME ACCEPTABLE TO LANDLORD AND ALLOWANCES FOR THIS WORK SHALL BE INCLUDED IN BID PRICE SUBMITTED.

1.15 INTERRUPTION OF SERVICES

- A. INTERRUPTION OF EXISTING PLUMBING SERVICES TO ANY PART OF THE BUILDING SHALL OCCUR ONLY BY PRE-ARRANGEMENT WITH AND AT TIMES SUITABLE TO THE LANDLORD.
- B. INTERRUPTIONS SHALL ONLY OCCUR DURING PREMIUM TIME PERIODS, ALL ALLOWANCES FOR THIS SHALL BE INCLUDED IN THE PRICE SUBMITTED.

1.16 VALUATION OF CHANGES

- A. PROVIDE COMPLETE BREAKDOWN OF MATERIAL, LABOR, OVERHEAD, PROFIT, ETC., WHEN SUBMITTING QUOTATIONS FOR CHANGE ORDERS ON THIS PROJECT.
- B. THE HOUR/LABOR RATE SHALL BE INCLUSIVE OF ALL CHARGES FOR SUPERVISION, VARIABLE LABOR FACTORS, HAND TOOLS, PAYROLL BURDENS, HEIGHT FACTORS, WARRANTIES, STORAGE, RENTALS, ADDITIONAL BONDING, PARKING, CLEAN-UP, AS-BUILT DRAWINGS, HOISTING, FREIGHT AND DELIVERY, BUT EXCLUSIVE OF OVERHEAD AND PROFIT.

1.17 COMPLETION OF CONTRACT

- A. ALL EQUIPMENT MUST BE CLEANED AND TESTED BEFORE FINAL ACCEPTANCE BY THE CONSULTANT.
- B. DEFECTS AND DEFICIENCIES WHICH ORIGINATE OR BECOME EVIDENT DURING THE WARRANTY PERIOD MUST BE REPAIRED OR REPLACED, AT NO COST.

1.18 DEMOLITION

- A. VISIT THE SITE, EXAMINE THE EXISTING CONDITIONS AND BECOME FAMILIAR WITH THE EXTENT OF THE NECESSARY REMOVAL, RELOCATION, RECONNECTING AND REROUTING OF PLUMBING EQUIPMENT AND PIPING AS NECESSARY FOR THE COMPLETION OF THE PROJECT.
- B. REVIEW AND CONFIRM WITH THE ARCHITECT/DESIGNERS DRAWINGS FOR THE COMPLETE EXTENT OF DEMOLITION AND ALTERNATION.
- C. ENSURE THAT ALL EXISTING PLUMBING PIPING OR SYSTEMS, IN AREAS OUTSIDE THE AREAS OF THIS WORK, THAT ARE REQUIRED TO REMAIN IN SERVICE, SHALL DO SO.
- D. RELOCATE ANY PLUMBING PIPING OR EQUIPMENT THAT IS REQUIRED TO REMAIN IN SERVICE, THAT IS SECURED TO EXISTING WALLS, FLOORS OR CEILINGS TO BE DEMOLISHED.
- E. ALL EXISTING PLUMBING EQUIPMENT OR PIPING WHICH IS NO LONGER REQUIRED SHALL BE REMOVED AND DISPOSED OF, OFF SITE.
- F. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BASE BUILDING INCURRED BY WORK OF THIS DIVISION, OR REPAIR TO THE SATISFACTION OF THE CONSULTANT.

G. CARRY OUT THE WORK WITH MINIMUM OF NOISE, DUST AND DISTURBANCE.

1.19 UNIT PRICES

- A. SUBMIT THE FOLLOWING LIST OF UNIT PRICES (FURNISH AND INSTALL):
 1. FIXTURES - \$ FOR EACH TYPE IN THE DOCUMENTS (INCLUDE ROUGHING)
 2. PIPING - \$/LF FOR EACH SIZE AND TYPE REQUIRED (INCLUDE HANGERS & INSULATION WHERE APPLICABLE)

PART 2 MATERIALS

2.01 PIPING AND FITTINGS

- A. SANITARY DRAINAGE AND VENT PIPING, STORM DRAINAGE
- B. ABOVEGROUND - CAST IRON HUBLESS PIPE AND FITTINGS COMPLYING WITH CAST IRON CAST IRON SOIL PIPE (CSP) STANDARD 301 AND/OR ASTM A-889 AND SHALL BE MADE IN THE UNITED STATES, AND MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE AND LISTED BY NSF INTERNATIONAL. ALL PIPE AND FITTINGS SHALL BE BY THE SAME MANUFACTURER.
- C. JOIN HUBLESS CAST-IRON SOIL PIPING ACCORDING TO CSPS 310 AND CSPIS "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK" FOR HUBLESS-COUPLING JOINTS. USE HEAVY DUTY SHIELDED COUPLINGS HAVING NEOPRENE CASKETS CONFORMING TO ASTM C 1540 WITH 3" WIDE 304 STAINLESS STEEL CORRUGATED SHELD AND FOUR STAINLESS STEEL BANDS FOR SIZES 1-1/2 THROUGH 4" (3X STAINLESS STEEL BANDS FOR 5" & LARGER). ALL COUPLINGS SHALL BE ANCO-HUSKY SERIES HD 2000 HEAVY DUTY OR APPROVED EQUAL.
- D. HORIZONTAL PIPE AND FITTINGS 3" DIA. AND LARGER MUST BE SUITABLY BRACED TO PREVENT HORIZONTAL MOVEMENT. THIS MUST BE DONE AT EVERY BRANCH OPENING OR CHANGE OF DIRECTION BY THE USE OF BRACES, BLOCKS, RODDING, OR OTHER SUITABLE METHOD, IN ORDER TO PREVENT MOVEMENT OR JOINT SEPARATION PER CHAPTER IV OF THE CSPH HANDBOOK.
- E. UNDERGROUND - CAST IRON HUB AND SPOOT SERVICE WEIGHT PIPE AND FITTINGS COMPLYING WITH CSPS STANDARD H-67 AND/OR ASTM A-74-68 AND SHALL BE MADE IN THE UNITED STATES, AND MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE AND LISTED BY NSF INTERNATIONAL. ALL PIPE AND FITTINGS SHALL BE BY THE SAME MANUFACTURER.
- F. JOIN HUB-AND-SPOOT, CAST-IRON SOIL PIPING WITH GASKETED JOINTS ACCORDING TO CSPIS "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK" FOR COMPRESSION JOINTS. JOINTS SHALL BE MADE WITH PUSH-ON NEOPRENE RUBBER COMPRESSION GASKET CONFORMING TO CSPS STANDARD HSM-76.

B. DOMESTIC HOT AND COLD WATER PIPING, INDIRECT WASTE PIPING

- 1. PIPING (SOLDERED JOINTS): TYPE L HARD COPPER TUBE, DRAWN TEMPER, COMPLYING WITH ASTM B 88 AND NSF 61.
- 2. FITTINGS (SOLDERED JOINTS): WROUGHT COPPER SOLDER JOINT PRESSURE TIE FITTINGS COMPLYING WITH ASME B.16.22.
- 3. SOLDER FILLER METALS: ALLOY 50NS OR ALLOY 50N, 3N (SN) APPROXIMATELY 95%, AND SILVER (AG) APPROXIMATELY 5%, HAVING 0.10% MAXIMUM LEAD (PB) CONTENT.
- 4. SOLDERING FLUX: APPLY ASTM B 813, WATER-FLUSHABLE FLUX TO END OF TUBE. JOIN COPPER TUBE AND FITTINGS ACCORDING TO ASTM B 828 OR CDA'S "COPPER TUBE HANDBOOK."
- 5. ALL EXPOSED PIPING SHALL BE CHROME PLATED BRASS. ALL PIPE PASSING THROUGH WALLS, FLOORS, CEILING, AND PARTITIONS SHALL BE PROVIDED WITH CHROME PLATED BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS.

C. FUEL GAS PIPING

- 1. PIPING: ASTM A 53A 53M, BLACK STEEL, SCHEDULE 40, TYPE E OR S, GRADE B.
- 2. MALLEABLE IRON THREADED FITTINGS: ASME B16.3, CLASS 150, STANDARD PATTERN, PIPING UP TO 4" DIAMETER AND BELOW 1/2 PSIG.
- 3. WROUGHT-STEEL WELDING FITTINGS: STM A 234 234M FOR BUTT WELDING AND SOCKET WELDING. COMPLY WITH AWS D10.10/1201 FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND CHEMICAL ANALYSIS OF STEEL. PIPE SHALL BE WELDED, PIPING 4" AND LARGER AT ANY PRESSURE AND ANY SIZE PIPING WITH GAS PRESSURE ABOVE 1/2 PSIG SHALL BE WELDED.
- 4. PROTECTIVE COATING FOR UNDERGROUND PIPING: FACTORY-APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE. JOINT COVER KITS: EPOXY PAINT, ADHESIVE, AND HEAT-SHRINK PE SLEEVES.
- 5. WHERE PIPING IS EXPOSED TO EXTERIOR, PROVIDE WITH FACTORY APPLIED PROTECTIVE COATING OR USE 304 GALVANIZED STEEL. PIPE AND FITTINGS AFTER GALVANIZED PIPING THREADED HAVE BEEN CUT AND FITTINGS COMED PANT TO THE AREA OF PIPING WHERE THE GALVANIZATION HAS BEEN REMOVED.
- 6. EJECTOR AND SUMP PUMP DISCHARGE PIPING (IF INSTALLED):
 1. SCHEDULE 40 GALVANIZED STEEL PIPE ASTM A 53, GALVANIZED CAST IRON DRAINAGE FITTINGS ASME B16.2, AND THREADED END GROOVED END JOINTS AND STEEL PIPE, GROOVED-JOINT FITTING FITTINGS AND COUPLINGS, AND GROOVED JOINTS.
 2. INSTALL CHECK VALVE AND GATE VALVE ON EACH PUMP DISCHARGE.
 3. INSTALL SPRING LOADED, SILENT CHECK VALVE BETWEEN PUMP AND SHUTOFF VALVE ON EACH PUMP DISCHARGE.

2.02 VALVES - DOMESTIC WATER

- A. SHUT-OFF VALVES - 3" AND SMALLER, TWO PIECE, FULL PORT, LEAD-FREE BRONZE BALL VALVES, 600 PSI NON-SHOOK CWP, NSFANSI61-8 WITH THE CAPABILITY OF ACCEPTING EXTENDED OPERATING HANDELS, MILWAUKEE MODEL USP810S FOR THREADED ENDS OR USP1410S FOR THREADED ENDS, OR 11-1/2 LF FOR SOLDER ENDS.
- B. SHUT-OFF VALVES - 3" AND LARGER, LEAD-FREE BRONZE GATE VALVE, NON-RISING STEM, SOLID WEDGE, 300 PSI NON-SHOOK CWP, NSFANSI61-8, NIBCO 1-113-LF FOR THREADED ENDS OR 11-1/2 LF FOR SOLDER ENDS.
- C. CHECK VALVES - 2" AND SMALLER, LEAD-FREE BRONZE, Y-PATTERN, HORIZONTAL SWING, WITH RENEWABLE SEAT AND DISC. 200 PSI CWP NON-SHOOK, NSFANSI61-8, NIBCO 1413-Y-FLF FOR THREADED ENDS OR 11-1/2 LF FOR SOLDER ENDS.
- D. CHECK VALVES - 2 1/2" & 3": LOW LEAD, BRONZE BODY, SWING CHECK VALVE, 200 PSIG, NON-SHOOK, ASME B16.1, MILWAUKEE USP8F FOR THREADED ENDS, USP68 FOR SOLDERED ENDS.
- E. CHECK VALVES ON PUMP DISCHARGE, SILENT CHECK VALVE, FLANGED, CLASS 125, STAINLESS STEEL, SPRING & SCREWS, CAST IRON BODY, MILWAUKEE MODEL 1800.
- F. SOLENOID VALVE - DE-ENERGIZED CLOSED, ASCO MODEL #82100003, 120 V., WITH BRONZE BODY.
- G. PRESSURE REDUCING VALVE - 1/2" to 2", LEAD FREE, ASSE 1000 LISTED, DIRECT ACTING PRESSURE REDUCING VALVE WITH STRAINER, VALVE SHALL BE WATTS SERIES 12225.
- H. PRESSURE REDUCING VALVE - 2" AND 1", LEAD FREE, ASSE 1000 LISTED, DIRECT ACTING PRESSURE REDUCING VALVE WITH STRAINER, VALVE SHALL BE WATTS SERIES 12226S.

2.03 VALVE TAGS AND CHART

- A. PROVIDE FOR EACH VALVE, EXCEPT STOP VALVES AT FIXTURES, A 2 INCH DIAMETER BRASS TAG WITH 1 INCH HIGH NUMERICAL, STAMPED THEREON, SECURED TO THE VALVE BY MEANS OF BRASS S-HOOK OR BRASS CHAIN. EACH SYSTEM TO HAVE A LETTER DESIGNATION AS WELL.
- B. FURNISH AN APPROVED, NEATLY DRAWN VALVE CHART, PROPERLY FRAMED, SHOWING THE USE AND LOCATION OF EACH VALVE THAT IS TAGGED.

2.04 HANGERS AND SUPPORTS

- A. ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.
- B. EXCEPT AS OTHERWISE INDICATED, PROVIDE FACTORY FABRICATED HANGERS, CLAMPS, RODS, BUILDING ATTACHMENTS, INSULATION SAOLES AND INSULATION SHIELDS SHALL BE UL LISTED FM GLOBAL APPROVED AND COMPLYING WITH ANSI MSS-SP-58. CONTRACTOR SHALL SELECT AND APPLY HANGERS AND SUPPORTS IN ACCORDANCE WITH MSS-SP-58.
- C. ALL INSULATED HORIZONTAL PIPING LARGER THAN 1" DIAMETER SHALL BE HUNG WITH ADJUSTABLE GALVANIZED STEEL CLEVIS HANGERS, COOPER B LINE FIG. B3100, ALL INSULATED COPPER PIPING 3/4" DIAMETER OR SMALLER SHALL BE HUNG WITH ADJUSTABLE SWIVEL HANGER FOR COPPER TUBING, COOPER B LINE B3170CT.
- D. FOR ALL INSULATED HORIZONTAL PIPING PROVIDE CRUSH RESISTANT INSULATION INSERTS AT ALL PIPING SUPPORT POINTS (WHERE HANGERS OR STRUTS). INSULATION INSERT SHALL BE COOPER B LINE FIG. B338, 30 DEG. CALCIUM SILICATE SHIELD. HANGERS SHALL NOT PENETRATE INSULATION, WHEN INSULATED PIPING IS SUPPORTED WITH CLEVIS HANGERS OR SWIVEL HANGERS COOPER B LINE FIG. B3154 PRE-GALVANIZED INSULATION SHIELDS MAY BE USED.
- E. ALL HORIZONTAL CAST IRON UNSULLATED STEEL PIPING SHALL BE HUNG WITH ADJUSTABLE GALVANIZED STEEL CLEVIS HANGERS, COOPER B LINE FIG. B3100 PRE-GALVANIZED STANDARD CLEVIS HANGER.
- F. VERTICAL PIPING SHALL BE SUPPORTED BY MEANS OF RISER CLAMPS, RISER CLAMPS SHALL FIT EXACT PIPE SIZE FOR BARE PIPES. FOR CAST IRON PIPES USE TWO BOLT, GALVANIZED BLACK STEEL CLAMPS OR FOUR-BOLT, EXTRA HEAVY GALVANIZED STEEL RISER CLAMPS FOR COPPER TUBING USE CARBON STEEL COPPER PLATED RISER CLAMP.
- G. RODS FOR PIPE HANGERS SHALL BE CONTINUOUS THREADED ROD, GALVANIZED STEEL SIZED FOR THE LOAD REQUIRED.
- H. C-CLAMPS MUST BE INSTALLED WITH RETAINING STRAPS.
- I. ATTACH HANGER RODS TO THE BUILDING ONLY IN A MANNER APPROVED BY THE ARCHITECT. DO NOT HANG PIPING FROM DUCTWORK OR OTHER PIPING. CHAIN STRAPS, PERFORATED BARS OR WIRE HANGERS SHALL NOT BE PERMITTED.
- J. INTERVALS OF SUPPORTS
 1. ALL HORIZONTAL CAST IRON PIPING SHALL BE SUPPORTED ON FIVE FOOT CENTERS AND AT ALL JOINTS. IN ADDITION ALL CAST IRON HUB PIPING AND FITTINGS 3" DIA. AND LARGER MUST BE SUITABLY BRACED TO PREVENT HORIZONTAL MOVEMENT. THIS MUST BE DONE AT EVERY BRANCH OPENING OR CHANGE OF DIRECTION BY THE USE OF BRACES, BLOCKS, RODDING, OR OTHER SUITABLE METHOD. TO PREVENT MOVEMENT OR JOINT SEPARATION PER CHAPTER IV OF THE CAST IRON SOIL PIPE INSTITUTE HANDBOOK.
 2. ALL HORIZONTAL STEEL SCREENED PIPING SHALL BE SUPPORTED ON TEN FOOT CENTERS.

- 3. ALL HORIZONTAL COPPER TUBING SHALL BE SUPPORTED BY HANGERS NOT OVER SIX FEET APART FOR TUBING 1-1/4" DIA. AND SMALLER AND NOT OVER TEN FEET APART FOR TUBING 1-1/2" AND LARGER.

K. PROVIDE SEISMIC RESTRAINTS FOR ALL PIPING SYSTEMS AND EQUIPMENT AS REQUIRED BY LOCAL AND STATE CODES.

2.05 INSULATION

- A. DOMESTIC COLD WATER, HOT WATER, HOT WATER REORC. PIPING, HORIZONTAL STORM PIPING:
 1. JOHNS MANVILLE MICRO-LOK HP FIBER GLASS PIPE INSULATION WITH FACTORY APPLIED ALL SERVICE VAPOR RETARDER JACKET WITH SELF-SEALING CLOSURE LAP, COMPLYING WITH ASTM C401, ASTM C585, ASTM C1136 AND ASTM E84, COMPOSITE PIR, 2"X0.01 LISTED AND LABELED. FIRE AND SMOKE HAZARD RATING NOT TO EXCEED A FLAME SPREAD OF 25 OR SMOKE DEVELOPMENT OF 50.
 2. FITTINGS AND VALVES TO BE COVERED WITH JOHNS MANVILLE ZESTON 2600 SERIES STANDARD GAUGE PVC FITTING COVERS WITH HALO TEMPERATURE RESISTANT FIBER GLASS INSERTS.
 3. PROVIDE 1" THICK INSULATION FOR DOMESTIC WATER PIPING AND HORIZONTAL STORM PIPING.
- B. INSULATE ALL EXPOSED DRAINAGE PIPING INCLUDING HOT, COLD AND TEMPERED WATER SUPPLIES UNDER LAVATORIES OR SINKS. INSTALLED COVER SHALL MEET A 1/4" X 1/4" X 1/4" X 60.5, ICC-ANSI 1171 60.6, OR GSA & OOD'S ABA 60.5, REQUIREMENT TO "PROTECT AGAINST CONTACT - NO SHARP OR ABRASIVE SURFACES" COVER MATERIAL TO BE 1/8" THICK PVC WITH ANTIMICROBIAL, ANTI-FUNGAL, AND UV INHIBITED PROPERTIES. PLUMBER'S PRO-EXTREME OR APPROVED EQUAL.

2.06 SLEEVES AND FIRE STOPPING

- A. PROVIDE SLEEVES FOR ALL PIPES PASSING THROUGH WALLS, FLOORS AND PARTITIONS.
- B. SLEEVES THROUGH WALLS, AND WHERE SERVING EXPOSED PIPE PENETRATING FLOORS SHALL BE SCHEDULE 40.
- C. SLEEVES WITH FURRED OUT ENCLOSURE, GYPSUM BOARD PARTITIONS AND BLOCK WALLS SHALL BE 18 GAUGE GALVANIZED SHEET METAL.
- D. ALL SLEEVES THROUGH RATED WALLS OR PARTITIONS SHALL FORM A FULL CLASSIFIED FIRESTOP.
- E. FIRESTOPPING CAULK SHALL BE SIMILAR TO 3M CP 29WB - CAULK. FIRESTOPPING WRAP SHALL BE SIMILAR TO 3M FS-195 - WRAP/STRIP.

2.07 ESCUTCHEONS

- A. INSTALL ESCUTCHEONS ON BOTH SIDES OF CONSTRUCTION WHEREVER PIPES PASS THROUGH WALLS, FLOORS, PARTITIONS OR CEILINGS. ESCUTCHEONS SHALL BE HELD IN PLACE WITH SET SCREWS. TAKE SPECIAL CARE TO PROTECT THE ESCUTCHEONS DURING THE COURSE OF CONSTRUCTION.
- B. ESCUTCHEON APPLICATION SCHEDULE
 2. UNFINISHED SPACES SHALL BE PLAIN BRASS OR CAST IRON.

2.08 PIPE IDENTIFICATION

- A. INSTALL MANUFACTURING PIPE MARKERS ON EACH PIPING SYSTEM. INSTALL WITH FLOW INDICATION ARROWS SHOWING DIRECTION OF FLOW. LOCATE PIPE MARKERS EVERY TWENTY FEET ON EACH PIPE AND AT A MINIMUM OF ONE IN EACH ROOM.
- B. COMPLY WITH ASME A13.1 SCHEMES FOR THE IDENTIFICATION OF PIPING SYSTEMS FOR LETTER SIZE, LENGTH OF COLOR FIELD, COLORS, AND VIEWING ANGLE OF IDENTIFICATION DEVICES FOR PIPING.

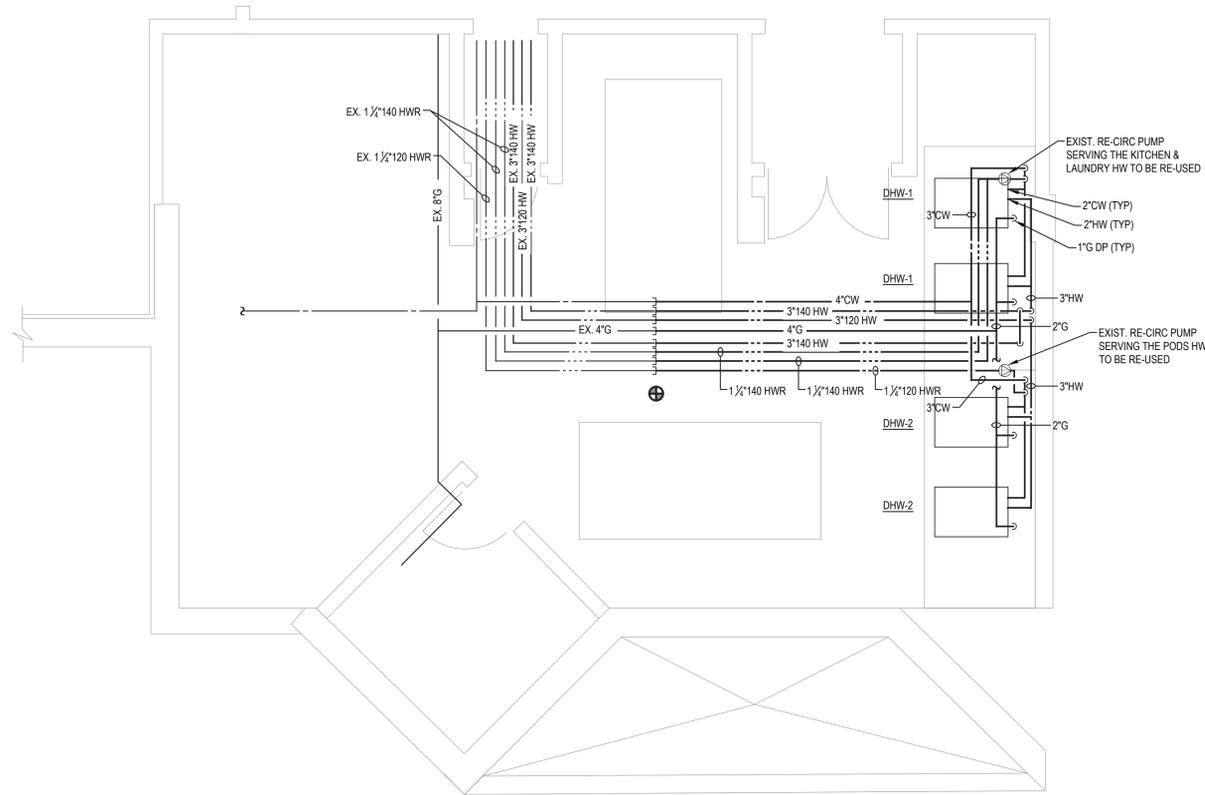
2.09 PLUMBING FIXTURES AND TRIM

- A. FURNISH AND INSTALL NEW PLUMBING FIXTURES AND TRIM WHERE SHOWN ON THE CONTRACT DRAWINGS. THE ARCHITECT'S INTERIOR FINISH DRAWINGS SHALL BE FOLLOWED FOR THE LOCATION OF ALL NEW FIXTURES.
- B. REFER TO ARCHITECTS DRAWINGS FOR SPECIFICATIONS OF FIXTURES AND FAUCETS.
- C. FIXTURES SHALL COMPLY WITH ALL STANDARDS AND ADA REQUIREMENTS AND SHALL HAVE MAXIMUM FLOW RATES AS REQUIRED BY LOCAL AND STATE WATER CONSERVATION REQUIREMENTS.
- D. EACH FIXTURE SUPPLY CONNECTION SHALL BE PROVIDED WITH INDIVIDUAL SHUT-OFF OR STOP VALVES.
- E. ALL TRIM FITTINGS, TRAPS, ETC. EXPOSED TO VIEW AT FIXTURES SHALL BE HEAVY CHROME PLATED FINISH. PROVIDE ONE PIECE CAST BRASS CHROMIUM-PLATED ESCUTCHEONS WITH SET SCREWS FOR PIPES PENETRATING THE WALL.
- F. PROVIDE NECESSARY SUPPORTS, CARRIERS, BRACKETS, PLATES ETC. FOR SECURING FIXTURES RIGIDLY IN PLACE.
- G. PRIOR TO FINAL ACCEPTANCE BY THE TENANT/OWNER ADJUST ALL FAUCETS AND FLUSH VALVES FOR PROPER FLOW IN ACCORDANCE WITH MANUFACTURERS INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.

H. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL PLUMBING FIXTURES FROM DAMAGE

- I. INSULATE ALL EXPOSED DRAINAGE PIPING INCLUDING HOT, COLD AND TEMPERED WATER SUPPLIES UNDER LAVATORIES OR SINKS TO COMPLY WITH ADA REQUIREMENTS. SEE INSULATION SECTION FOR SPECIFICATION OF MATERIAL.
- J. WATER CLOSETS - FOR WALL HUNG FIXTURE PROVIDE APPROPRIATE CARRIER, JAY R. SMITH OR EQUAL.

PART 3 EXECUTION



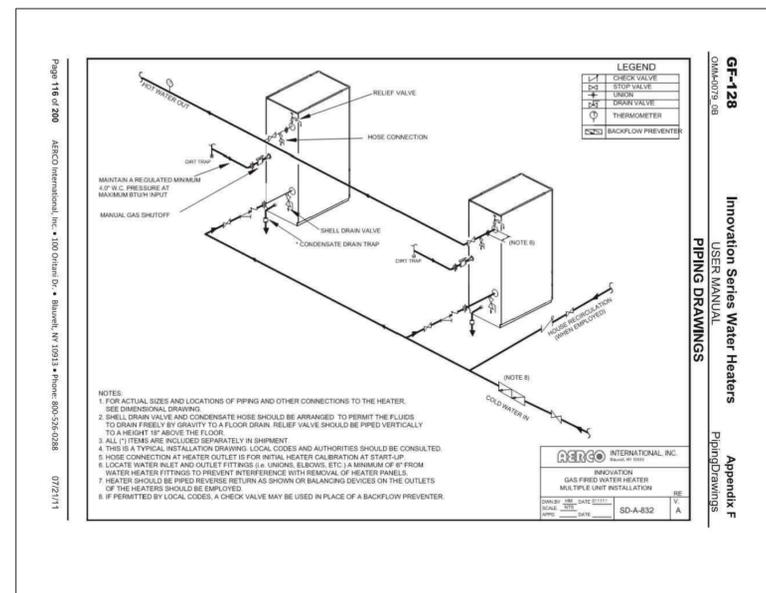
PLUMBING - BASEMENT PART PLAN
SCALE: 1/2"=1'-0"

PLUMBING GENERAL NOTES

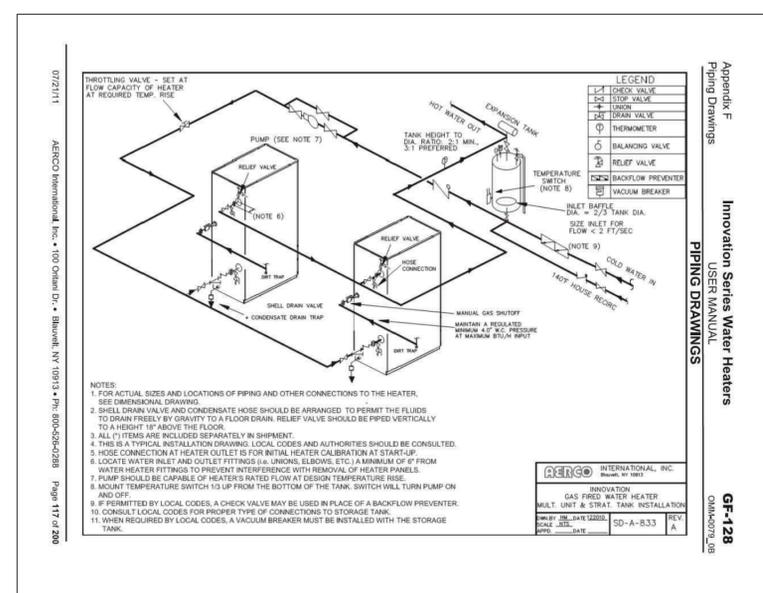
- ROUTING OF WASTE, VENT, AND DOMESTIC WATER PIPING IS SHOWN DIAGRAMMATICALLY ONLY. PLUMBING CONTRACTOR MUST DETERMINE EXACT ROUTING OF NEW PIPING COORDINATED WITH ALL NEW AND EXISTING CONDITIONS. FIELD VERIFY EXACT SIZES OF THE EXIST. CW, HW, HWR PIPING.
- THE PLUMBING CONTRACTOR SHALL COORDINATE ALL NEW WORK WITH THE EXISTING CONDITIONS AND THE NEW WORK OF ALL OTHER TRADES ON THE JOB SITE AND SHALL BE RESPONSIBLE TO REPAIR AND REPLACE ANY EXISTING SUSPENDED CEILING AND / OR FINISHES DAMAGED BY THE INSTALLATION OF EQUIPMENT, PIPING, FIXTURES, ETC. UNDER THE PLUMBING CONTRACTOR CONTRACTOR TO VERIFY ON SITE THE EXACT LOCATION OF EXISTING SAN, VENT, CW & HW RISER PIPE BEFORE INSTALLING ANY NEW WORK.
- ALL FIRE PROOFING WORK AFFECTED BY NEW INSTALLATION ARE TO BE RESTORED TO ITS ORIGINAL CONDITION AND THE REQUIRED RATING.
- PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODES AND BUILDING STANDARD FOR ALTERATION CONSTRUCTION.
- ANY HOT AND COLD WATER REQUESTS FOR SHUT RISER DOWNS SHALL BE MADE TO THE BUILDING 2 WEEKS IN ADVANCE.
- CONTRACTOR SHALL PROVIDE AN ALLOWANCE IN HIS BID PRICE TO MODIFY EXISTING PLUMBING SYSTEM UPON THE REQUEST OF THE CLIENT TO ACCOMMODATE THE NEW SCOPE OF WORK.
- CONTRACTOR SHALL COORDINATE WITH THE ELECTRICIAN FOR ANY POWER REQUIREMENTS ON WATER HEATER AND CIRCULATION PUMP.
- REMOVE EXISTING TEMPERATURE MIXING VALVE AND RELATED TEMPERED WATER, HOT & COLD WATER SERVICES LINES TO EXISTING WATER HEATERS, CAP EXISTING HW, CW, HWR LINES IN THE CEILING WHERE INDICATED ON THE FLOOR PLAN.
- CONTRACTOR TO COORDINATE WITH THE ELECTRICIAN ALL NEW CONNECTIONS/RECONNECTIONS OF ANY ELECTRICAL CIRCUITING AND CONTROLS AS NECESSARY, I.E., CIRCULATION PUMP, AQUASTAT, ETC.
- CONTRACTOR TO PROVIDE AN ALLOWANCE IN HIS BID PRICE TO FURNISH & INSTALL NEW CIRCULATION PUMPS UPON THE REQUEST OF THE CLIENT.

GE Crotonville - Executive Residence Building Water Heater Replacement

Old Albany Post Road,
Ossining, NY



DWH-1: AERCO INNO 1060 - MANUFACTURER'S PIPING DETAIL (FOR REFERENCE)



DWH-2: AERCO INNO 1350 - MANUFACTURER'S PIPING DETAIL (FOR REFERENCE)

Sod	
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Date	Issued
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Drawing Title:	
PLUMBING BASEMENT FLOOR PART PLAN	
Scale:	Issue Date:
1/2"=1'-0"	10/XX/2021
Proj Manager:	Proj Engineer:
RR	-
AMA Project No:	
G003-03-017	
Drawing No:	
P-501	
NYC DCR NUMBER:	

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION THIS PLAN IS APPROVED ONLY FOR THE WORK ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

