IOWA | Department of Administrative Services

KIM REYNOLDS, GOVERNOR
ADAM GREGG, LT. GOVERNOR

ADAM STEEN, DIRECTOR

March 8, 2024

To: All Potential Respondents
From: Construction Procurement
Subject: RFQ918001-01 DOC IMCC Hot Water Piping Replacement

Request for Quote

The State of Iowa is conducting a Request for Quote for a contractor to remove and replace hot water piping and insulation at the Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241. See Exhibit B for additional detail.

All work must be done on-site at Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241 and all personnel must pass a background check. Information required for the background check includes full name, birthdate, state driver's license # or State id#, and social security number.

The work shall be substantially completed no later than May 17, 2024.

The Project is located at Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241

Pre-Quote virtual meeting will be held on March 19, 2024 @ 9:00 am. (This meeting is not mandatory)
Join on your computer, mobile app or room device
Click here to join the meeting Meeting ID: 291 878 408 166 Passcode: mW6H5S
Or call in (audio only) +1 515-598-7333,,608205447# Phone Conference ID: 608 205 447#

Please email your quote using the Exhibit A pricing form to construction.procurement@iowa.gov prior to March 28, 2024 at 2:00 pm (CT).

All questions regarding this solicitation must be received by email by 2:00 pm, (CT) on March 21, 2024.

Contract Terms and Conditions

This procurement will result in a Consensus 802 Agreement. By submitting a quote, respondent agrees to the contract terms and conditions available at:
https://das.iowa.gov/sites/default/files/procurement/pdf/ConsensusDoc802.pdf

Performance Bond

Respondent must provide a Performance and Payment Bond in accordance with Section 10.8 of Consensus 802 Agreement.

Insurance Requirements

See sample Certificate of Insurance attached as Exhibit D for required limits, additional insured requirements and waiver of subrogation.

Exhibit A Pricing Form
DOC IMCC Hot Water Piping Replacement
Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241
Request for Quote RFQ918001-01

Due Thursday, March 28, 2024 at 2:00 PM (CT)

Please submit this completed form with your Quote to:
Attention: Michael Bradbury
Iowa Department of Administrative Services - Central Procurement
construction.procurement@iowa.gov

This form is to be completed in ink or typewritten.
Only pricing on this form or an exact copy of this form will be accepted.
Pricing Form shall be signed by an officer of the firm with authority to bind Respondent to Contract.

Respondent acknowledges receipt of the following Addenda (if issued) which are part of the RFQ documents:

Addendum No. _____Date_____

Addendum No._____ Date _____

Freight Terms: FOB Destination, Freight Pre-Paid

The State reserves the right to reject any or all quotes without penalty and to waive minor deficiencies and informalities if, in the judgement of the State, it's best interests will be served.

Respondents must submit pricing for all scope of work items indicated per the attached Exhibit B. The State reserves the right to evaluate pricing. The State intends to make one Award for this project.

BP 001 – IMCC Hot Water Piping Replacement (Substantial Completion Date May 17, 2024)

Quote Total $_____

Please note all pricing is to be delivered price. That is why we are stating FOB Destination, Freight Pre-Paid.

Signature _____

Name (Print) _____

Title _____

Company _____

Address _____

City, St., Zip _____

Phone #_____ **Fax #**_____

E-mail _____

Exhibit B Scope of Work

DOC IMCC Hot Water Piping Replacement
Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241
Request for Quote RFQ918001-01

Due Thursday, March 28, 2024 at 2:00 PM (CT)

IMCC Hot Water Piping Replacement:

Bid Package Instructions

A. **BP 001** – IMCC Hot Water Piping Replacement: Trade Contractor shall include all of the following, but not limited to, as part of the contract (Substantial Completion May 17, 2024):
   1. All construction associated with the construction of the IMCC Hot Water Piping Replacement.
   2. Water line can only be shut down for a maximum of 4 hours.
   3. Contractor should plan to work on one line at a time to avoid night work.
   4. Drawing numbers M300 & M700
   5. Technical Specifications 22 07 16, 22 11 16 and P1-Piping Specifications

SECTION 22 07 16
PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Domestic cold and hot water piping insulation including return.

1.02 REFERENCE STANDARDS

A. ASTM B 209/B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2007.

B. ASTM C 177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus; 2004.

C. ASTM C 518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2004.

D. ASTM C 534 - Standard Specification for Preformed Flexible Elastomeric Cellular Thermal Insulation in Sheet and Tubular Form; 2007a.

E. ASTM C 547 - Standard Specification for Mineral Fiber Pipe Insulation; 2007.

F. ASTM C 585 - Standard Practice for Inner and Outer Diameters of Rigid Thermal Insulation for Nominal Sizes of Pipe and Tubing (NPS System); 1990 (Reapproved 2004).

G. ASTM C 591 - Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation; 2007.

H. ASTM C 795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2003.

I. ASTM D 2842 - Standard Test Method for Water Absorption of Rigid Cellular Plastics; 2006.

J. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2008.

K. ASTM E 96/E 96M - Standard Test Methods for Water Vapor Transmission of Materials; 2005.

L. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials; National Fire Protection Association; 2006.

M. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Underwriters Laboratories Inc.; 2003.

1.03 SUBMITTALS

A. Insulation Schedule: Provide insulation schedule indicating insulation material, thickness, and jacket material for each service, and locations.

B. Product Data: Provide product description and thermal characteristics:
   1. Insulation.
   2. Insulation Jackets.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Packaging: Insulation material containers shall be marked by manufacturer with appropriate ASTM standard designation, type and grade, and maximum use temperature.

1.05 COORDINATION

A. Coordinate sizes and locations of supports, hangers, and insulation shields.

B. Coordinate clearance requirements with piping Installer for piping insulation application. Before preparing piping Shop Drawings, establish and maintain clearance requirements for installation of insulation and field-applied jackets and finishes and for space required for maintenance.

1.06 SCHEDULE

A. Schedule insulation application after pressure testing systems and, where required, after installing and testing heat tracing. Insulation application may begin on segments that have satisfactory test results.

B. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

PART 2 PRODUCTS

2.01 REQUIREMENTS FOR ALL PRODUCTS OF THIS SECTION

A. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E 84, NFPA 255, or UL 723.

2.02 INSULATION MATERIALS

A. Comply with requirements in "Piping Insulation Schedule, General," "Indoor Piping Insulation Schedule," "Outdoor, Aboveground Piping Insulation Schedule," and "Outdoor, Underground Piping Insulation Schedule" articles for where insulating materials shall be applied.

B. Products shall not contain asbestos, lead, mercury, or mercury compounds.

C. Products that come in contact with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C 871.

D. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable according to ASTM C 795.

E. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process.

F. Mineral-Fiber, Preformed Pipe Insulation:
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Fibrex Insulations Inc.; Coreplus 1200.
      b. Johns Manville; Micro-Lok.
      c. Knauf Insulation; 1000-Degree Pipe Insulation.
      d. Manson Insulation Inc.; Alley-K.
      e. Owens Corning; Fiberglas Pipe Insulation.
      f. Engineer Preapproved Equal.
   2. Type I, 850°F (454°C) Materials: Mineral or glass fibers bonded with a thermosetting resin. Comply with ASTM C 547, Type I, Grade A, with factory-applied ASJ.
   3. Insulation: ASTM C547; rigid molded, noncombustible
      a. ‘K’ Value: ASTM C177, 0.24 at 75°F.
      b. Maximum moisture absorption: 0.2% by volume.
   4. Vapor Barrier Jacket: ASTM C921
      a. All service jacket (ASJ): White Kraft paper with glass fiber yarn, bonded to aluminized film.
      b. Moisture vapor transmission: ASTM E96; 0.02 perm-inches.
   5. Tie Wire: 0.048” stainless steel with twisted ends on maximum.
      a. 12” centers.
   6. Vapor Barrier Lap Adhesive:
      a. Compatible with insulation.

G. Flexible Elastomeric Insulation, Preformed Pipe Insulation:
   1. Products: Subject to compliance with requirements, provide one of the following:
      a. Aeroflex USA, Inc.: Aerocel.

b. Armacell LLC: Armaflex.
c. K-Flex USA: Insul-Sheet and K-FLEX LS.
d. Engineer Preapproved Equal.

2. Insulation: Closed-cell, sponge- or expanded-rubber materials. Complying with ASTM C534, Type I for tubular materials and Type II for sheet materials.
   a. Minimum service temperature: -40°F.
   b. Maximum service temperature: 220°F.
3. Adhesive:
   a. Materials shall be compatible with insulation materials.
   b. Products: Subject to compliance with requirements, provide one of the following:
      1) Aeroflex USA, Inc.: Aeroseal.
      2) Armacell LLC: Armaflex 520 Adhesive.
      3) K-Flex USA: R-373 Contact Adhesive.
      4) Foster Bran, Specialty Construction Brands, Inc., a business of H.B. Fuller Company: 85-75.
      5) Engineer Preapproved Equal.
   c. For indoor applications, adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.03 MASTICS

A. Materials shall be compatible with insulation materials, jackets, and substrates; comply with MIL-PRF-19565C, Type II.

B. Vapor-Barrier Mastic: Water based; suitable for indoor use on below-ambient services.
1. Water-Vapor Permeance: ASTM E 96/E 96M, Procedure B, 0.013 perm at 43-mil dry film thickness.
2. Service Temperature Range: -20 to 180°F (-29 to 82°C).
3. Solids Content: ASTM D 1644, 58 percent by volume and 70 percent by weight.
4. Color: White.

C. Vapor-Barrier Mastic: Solvent based; suitable for indoor use on below-ambient services.
1. Water-Vapor Permeance: ASTM F 1249, 0.05 perm (0.03 metric perm) at 35-mil (0.9-mm) dry film thickness.
2. Service Temperature Range: 0 to 180°F (-18 to 82°C).
3. Solids Content: ASTM D 1644, 44 percent by volume and 62 percent by weight.
4. Color: White.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of insulation application:
1. Verify that systems to be insulated have been tested and are free of defects.
2. Verify that surfaces to be insulated are clean and dry

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.

B. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

3.03 GENERAL INSTALLATION REQUIREMENTS

A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping including fittings, valves, and specialties.

B. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of pipe system as specified in insulation system schedules.

C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.

D. Install insulation with longitudinal seams at top and bottom of horizontal runs.

E. Install multiple layers of insulation with longitudinal and end seams staggered.

F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.

G. Keep insulation materials dry during application and finishing.

H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.

I. Install insulation with least number of joints practical.

J. Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic
   1. Install insulation continuously through hangers and around anchor attachments.
   2. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic.
   3. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
   4. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield

K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.

L. Install insulation with factory-applied jackets as follows:
   1. Draw jacket tight and smooth.
   2. Cover circumferential joints with 3-inch wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 4 inches o.c.
   3. Overlap jacket longitudinal seams at least 1-1/2 inches (38 mm). Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap.
   4. Cover joints and seams with tape, according to insulation material manufacturer's written instructions, to maintain vapor seal.
   5. Where vapor barriers are indicated, apply vapor-barrier mastic on seams and joints and at ends adjacent to pipe flanges and fittings.

M. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.

N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches (100 mm) beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.

P. For above-ambient services, do not install insulation to the following:
   1. Vibration-control devices.
   2. Testing agency labels and stamps.
   3. Nameplates and data plates.
   4. Cleanouts.

3.04 GENERAL PIPE INSTALLATION

A. Requirements in this article generally apply to all insulation materials except where more specific requirements are specified in various pipe insulation material installation articles.

B. Insulation Installation on Fittings, Valves, Strainers, Flanges, and Unions:
   1. Install insulation over fittings, valves, strainers, flanges, unions, and other specialties with continuous thermal and vapor-retarder integrity unless otherwise indicated.
   2. Insulate pipe elbows using preformed fitting insulation or mitered fittings made from same material and density as adjacent pipe insulation. Each piece shall be butted tightly against adjoining piece and bonded with adhesive. Fill joints, seams, voids, and irregular surfaces with insulating cement finished to a smooth, hard, and uniform contour that is uniform with adjoining pipe insulation.
   3. Insulate tee fittings with preformed fitting insulation or sectional pipe insulation of same material and thickness as used for adjacent pipe. Cut sectional pipe insulation to fit. Butt each section closely to the next and hold in place with tie wire.
   4. Insulate valves using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. For valves, insulate up to and including the bonnets, valve stuffing-box studs, bolts, and nuts. Fill joints, seams, and irregular surfaces with insulating cement pieces with adhesive.
   5. Insulate strainers using preformed fitting insulation or sectional pipe insulation of same material, density, and thickness as used for adjacent pipe. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker. Fill joints, seams, and irregular surfaces with insulating cement. Insulate strainers so strainer basket flange or plug can be easily removed and replaced without damaging the insulation and jacket. Provide a removable reusable insulation cover. For below-ambient services, provide a design that maintains vapor barrier.
   6. Insulate flanges and unions using a section of oversized preformed pipe insulation. Overlap adjoining pipe insulation by not less than two times the thickness of pipe insulation, or one pipe diameter, whichever is thicker.
   7. Cover segmented insulated surfaces with a layer of finishing cement and coat with a mastic. Install vapor-barrier mastic for below-ambient services and a breather mastic for above-ambient services. Reinforce the mastic with fabric-reinforcing mesh. Trowel the mastic to a smooth and well-shaped contour.
   8. For services not specified to receive a field-applied jacket except for flexible elastomeric and polyolefin, install fitted PVC cover over elbows, tees, strainers, valves, flanges, and unions. Terminate ends with PVC end caps. Tape PVC covers to adjoining insulation facing using PVC tape.
   9. Stencil or label the outside insulation jacket of each union with the word "union." Match size and color of pipe labels.

C. Insulate instrument connections for thermometers, pressure gages, pressure temperature taps, test connections, flow meters, sensors, switches, and transmitters on insulated pipes. Shape insulation at these connections by tapering it to and around the connection with insulating cement and finish with finishing cement, mastic, and flashing sealant.

D. Install removable insulation covers at locations indicated. Installation shall conform to the following:
   1. Make removable flange and union insulation from sectional pipe insulation of same thickness as that on adjoining pipe. Install same insulation jacket as adjoining pipe insulation.

2. When flange and union covers are made from sectional pipe insulation, extend insulation from flanges or union long at least two times the insulation thickness over adjacent pipe insulation on each side of flange or union. Secure flange cover in place with stainless-steel or aluminum bands. Select band material compatible with insulation and jacket.
3. Construct removable valve insulation covers in same manner as for flanges, except divide the two-part section on the vertical center line of valve body.
4. When covers are made from block insulation, make two halves, each consisting of mitered blocks wired to stainless-steel fabric. Secure this wire frame, with its attached insulation, to flanges with tie wire. Extend insulation at least 2 inches over adjacent pipe insulation on each side of valve. Fill space between flange or union cover and pipe insulation with insulating cement. Finish cover assembly with insulating cement applied in two coats. After first coat is dry, apply and trowel second coat to a smooth finish.
5. Unless a PVC jacket is indicated in field-applied jacket schedules, finish exposed surfaces with a metal jacket.

3.05 INSTALLATION OF MINERAL-FIBER INSULATION

A. Insulation Installation on Straight Pipes and Tubes.
   1. Secure each layer of preformed pipe insulation to pipe with wire or bands and tighten bands without deforming insulation materials.
   2. Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
   3. For insulation with factory-applied jackets on above-ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.
   4. For insulation with factory-applied jackets on below-ambient surfaces, do not staple longitudinal tabs. Instead, secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.

B. Insulation Installation on Pipe Flanges:
   1. Install preformed pipe insulation to outer diameter of pipe flange.
   2. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation.
   3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with mineral-fiber blanket insulation.
   4. Install jacket material with manufacturer's recommended adhesive, overlap seams at least 1 inch, and seal joints with flashing sealant.

C. Insulation Installation on Pipe Fittings and Elbows:
   1. Install preformed sections of same material as straight segments of pipe insulation when available.
   2. When preformed insulation elbows and fittings are not available, install mitered sections of pipe insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire or bands.

D. Insulation Installation on Valves and Pipe Specialties:
   1. Install preformed sections of same material as straight segments of pipe insulation when available.
   2. When preformed sections are not available, install mitered sections of pipe insulation to valve body.
   3. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation.
   4. Install insulation to flanges as specified for flange insulation application.

3.06 FIELD QUALITY CONTROL

A. Visual inspection of work.

3.07 PIPING INSTALLATION SCHEDULE, GENERAL

A. Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.

B. Items Not Insulated: Unless otherwise indicated, do not install insulation on the following:
   1. Drainage piping located in crawl spaces.
   2. Underground piping.
   3. Chrome-plated pipes and fittings unless there is a potential for personnel injury.

3.08 INDOOR PIPING INSULATION SCHEDULE

A. Domestic Cold Water:
   1. Insulation shall be one of the following:
      a. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.
      b. Flexible Elastomeric Insulation, Preformed Pipe Insulation: 1 inch thick.

B. Domestic Hot Water/Return:
   1. Insulation shall be one of the following:
      a. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1-1/2 inch thick.
      b. Flexible Elastomeric Insulation, Preformed Pipe Insulation: 1 inch thick.

C. Drains:
      a. Mineral-Fiber, Preformed Pipe Insulation, Type I: 1 inch thick.

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SECTION 22 11 16
WATER PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aboveground domestic hot water pipes, tubes, and fittings inside buildings.

B. Valves.

1.02 REFERENCE STANDARDS

A. ANSI/ASME B31.1 - Power Piping; The American Society of Mechanical Engineers; latest edition.

B. ANSI/ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; latest edition.

C. ASTM D1784 - Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds; latest edition.

D. ASTM D2564 - Standard Specification for Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems; latest edition.

E. ASTM D2855 - Standard Specification for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings; latest edition.

F. ASTM F441 - Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80; latest edition.

G. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe; latest edition.

H. ASTM F656 - Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings; latest edition.

I. NSF/ANSI 14 – Certification of Plastic Piping Products; latest edition.

J. NSF/ANSI 61 – Drinking Water System Components; latest edition.

K. ANSI/AWWA C601 - Disinfecting Domestic Water Piping; American Water Works Association; latest edition.

L. ANSI/AWWA C651 - Disinfecting Water Mains; American Water Works Association; latest edition.

1.03 SUBMITTALS

A. Product Data:
   1. Provide data on pipe materials, pipe fittings, valves, and accessories. Indicate valve data and ratings.
   2. Provide manufacturers catalog information.

1.04 FIELD CONDITIONS

A. In order to become familiar with scope of work involved, visit existing site, before submitting bid, and carefully examine existing condition in order to have full knowledge and understanding of conditions and restrictions affecting performance of work required. Include in bid all work which is reasonably inferred by contract drawings and specifications, whether specifically shown or not, as a result of existing conditions, construction, irregularities and interferences which may affect work. No additional compensation will be considered for misunderstanding conditions to be met.

B. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
   1. Arrange all work so a minimum period of interruption or outages for pipe replacement.

2. Notify Owner no fewer than 48 hours in advance of proposed interruption of water service.
3. Do not interrupt water service without Owner's written permission.

1.05 WARRANTY

A. Guarantee all work including labor, material and equipment for this project for a period of one (1) year from date of acceptance by Owner.

PART 2 PRODUCTS

2.01 PIPING MATERIALS

A. Water piping and components shall comply with NSF 14 and NSF 61 Annex G.

2.02 CHLORINATED POLY(VINYL CHLORIDE) (CPVC) PLASTIC PIPE AND FITTINGS

A. All CPVC schedule 80 pipe shall be manufactured from Type IV, Grade 1 CPVC compound per ASTM D1784.

B. Do not use threaded connections.

C. Refer to Pipe Spec – P1.

2.03 VALVE COMPONENTS

A. Refer to Pipe Spec – P1.

2.04 STRAINERS

A. Refer to Pipe Spec – P1.

2.05 PIPE JOINING MATERIALS

A. Refer to Pipe Spec – P1.

2.06 TRANSITION FITTINGS

A. General Requirements:
   1. Same size as pipes to be joined.
   2. Pressure rating at least equal to pipes to be joined.
   3. End connections compatible with pipes to be joined.

B. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.

2.07 PIPE HANGERS AND SUPPORTS

A. Conform to ASME B31.9.

PART 3 EXECUTION

3.01 PIPING INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping.
   1. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations.
   2. Install piping as indicated unless minor deviations to layout are approved on coordination drawings.

B. Install water piping level and plumb.

C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.

D. Install piping to permit valve servicing.

E. Install nipples, unions, special fittings, and valves with pressure ratings the same as or higher than the system pressure rating used in applications below unless otherwise indicated.

F. Install piping free of sags and bends.

G. Install fittings for changes in direction and branch connections.

H. Install unions in piping around circuit setters.

3.02 PREPARATION

A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.

3.03 JOINT CONSTRUCTION

A. Install in accordance with manufacturer's instructions.

B. Make solvent-welded joints in accordance with ASTM D2855.

C. Flanged Joints: Select appropriate asbestos-free, nonmetallic gasket material in size, type, and thickness suitable for domestic water service. Join flanges with gasket and bolts according to ASME B31.9.

3.04 TRANSITION FITTING INSTALLATION

A. Install transition couplings at joints of dissimilar piping.
   1. Make joints using adapters compatible with materials of both piping systems.

3.05 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. When installing piping adjacent to equipment and machines, allow space for service and maintenance.

C. Connect domestic hot water piping to water-service piping with shutoff valve; extend and connect to the following:
   1. Domestic Hot Water Recirculation Pumps: Domestic Hot Water suction and discharge piping.
   2. Equipment: Cold- and hot-water supply piping as indicated, but not smaller than equipment connections.
      a. Provide shutoff valve and union for each connection.
      b. Use flanges instead of unions for NPS 2-1/2 and larger.

3.06 FIELD QUALITY CONTROL

A. Final assembly to be service tested.

3.07 PIPING SCHEDULE

A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

B. Flanges and unions may be used for aboveground piping joints unless otherwise indicated.

C. Aboveground domestic water piping:
   1. Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings per ASTM D1784.

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KFI ENGINEERS

Iowa Medical Classification Center

Hot Water Piping Replacement

P1

20-844.00 **03/04/2024**

PIPING SPECIFICATION FOR CHLORINATED POLYVINYL CHLORIDE (CPVC)

Maximum Pressure: 150 PSIG (see note 5)

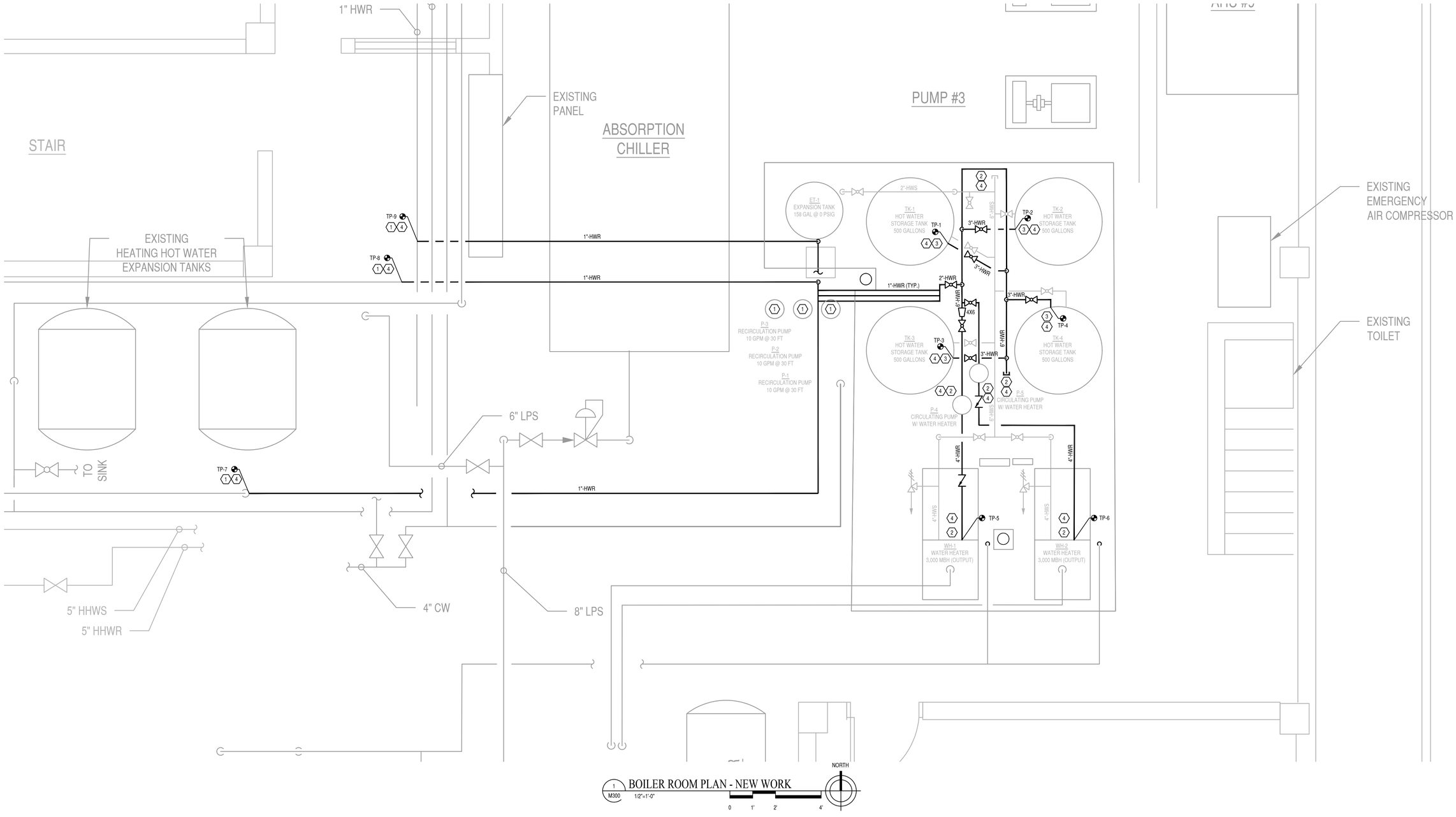
Maximum Temperature: 200° F (see note 5)

CHLORINATED POLYVINYL CHLORIDE (CPVC)

Service: HOT WATER, HOT WATER RECIRCULATION

Item	Size	Ends	ASTM Mat'l	Grade	Sch. or Rating	ANSI MSS	Gen. Note	Description
Pipe	1/2" to 6"	Plain	D1784	23447	80	B2.1	1, 6	
Fittings	1/2" to 6"	Socket	D1784	23447	80	B2.1	3	
Flanges	1/2" to 6"	Socket	F1970	23447	150	B16.5		Full Face
Unions	1/2" to 4	Socket	D1784	23447	80	B2.1	2	
Branch Connections	NOTE: Use reducinig tees to accommodate smaller than line size branch conenctions.							
Valve Components								
Ball	1/2" to 2"	Socket	F1970	23447	250	B16.5	4,5	Nibco U51TB-E Ball Valve or equal, Full Bore Port, CPVC Class 23447 Body, Floating Ball, O-ring Backing Seat, Double Union, CPVC Ball, PTFE Seats, Viton Seals, True Union, CPVC Body, EPDM Body & Seat Seal
	3" to 4"	Socket	F1970	23447	150	B16.5	4,5	Nibco S51TB-E Ball Valve or equal, Full Bore Port, CPVC Class 23447 Body, Floating Ball, O-ring Backing Seat, Double Union, CPVC Ball, PTFE Seats, Viton Seals, True Union, CPVC Body, EPDM Body & Seat Seal
Butterfly	3" to 6"	Wafer	F1970	23447	150	B16.5	5	Nibco W51BG-E-3 Butterfly Valve, CPVC Body, 416SS Stem, EPDM seals and boot
Check	1/2" to 4"	Socket	F1970	23447	150	B16.5	5	Nibco S51BC-E Ball Check, CPVC Ball, Double Union or equal, CPVC Class 23447 Body, Viton or EPDM Seats and SealsSeat Seal
Strainer	1/2" to 4"	Socket	D1784	23447	150	B16.5	5	Hayward YS Series Y-strainer or equal, CPVC Class 23447 Body, True Union Connection, EPDM seals, Screen SS 40-mesh
	6"	Flanged, FF	D1784	23447	150	B16.5	5	Hayward SB Series Basket-strainer or equal, Stainless Steel Basket, CPVC Body, EPDM seals
Valve Trim	Reference valve figure number described for specific valve type.							
Valve Packing	Reference valve figure number described for specific valve type.							
Plugs	Hex head threaded CPVC material							
Gaskets	6" & smaller	1/8" EPDM, Full Face, NFS 61 Certified Gasket Material, Garlock 98206 or equal.						
Bolts	Machine Bolt, ASTM A307 Gr A w/1 ASTM A563 Gr A Hvy Hex nut, with backup flat washer at bolt head and nut. Zinc coated							
GENERAL NOTES	1. All pipe shall be marked or tagged in accordance with ASTM requirements.							
	2. O-rings material of construction dependent on process fluid, see engineer for selections.							
	3. Screwed pipe and fittings shall only be used when connecting to equipment or as required to mount instrumentation. Do not use threaded connection for temperature above 150˚F. Threading requires 50% reduction in pressure rating for plain end pipe.							
	4. Ball valves through 4" use lever operator.							
	5. Pressure and temperature rating may be limited by certain components permitted by this specification. Reference manufacturer's recommeded pressure-tempearature restrictions.							
	6. All CPVC schedule 80 pipe shall be manufactured from a Type IV, Grade 1 CPVC compound per ASTM D1784. The pipe shall be manufactured in strict compliance to ASTM F441 and meet the Quality Assurance Test requirements of this standard. The pipe shall be produced by an ISO 9001 certified manufacturer. The pipe shall carry the National Sanitation Foundation (NSF) seal for water applications.							
	7. When attaching pipe to equipment pipe connection shall match equipment. RF to RF, FF to FF, Thrd to Thrd, etc. Required gasket to match flange type.							
	8. For specialty items see KFI engineering department.							
	9. Provide threaded end on outlet side of drain and vent valves to receive threaded plug or cap.							
	10. Thread Sealant: Spears Blue 75 non-hardening or equal.							
	11. Primer & Cement: IPS P-70 purple primer; IPS 714 CPVC medium-setting gray cement or equal							

RF = Raised Face, FF = Full Face, Thrd = Threaded, PI = Pressure Indicator, PT = Pressure Transmitter, TI = Temperature Transmitter, TT = Temperature Transmitter



1 M300 BOILER ROOM PLAN - NEW WORK
1/2"=1'-0"

KEYED MECHANICAL NOTES:

REFER TO 1/M700 (PID) FOR PIPING DETAILS.

1. DEMO EXISTING COPPER HWR PIPING AND REPLACE WITH NEW CPVC SCHEDULE 80 PIPING TO THE IN-LINE RECIRCULATION PUMPS AS INDICATED IN DRAWINGS. SET PUMPS TO LOWEST FLOW SETTING. SET CIRCUIT SETTERS TO 3 FT/S.
2. DEMO EXISTING COPPER HWR PIPING AND REPLACE WITH NEW CPVC SCHEDULE 80 PIPING FOR THE MAIN LOOP TO THE DOMESTIC HOT WATER HEATERS TO SERVE THE DOMESTIC HOT WATER STORAGE TANKS AS INDICATED IN DRAWINGS.
3. DEMO EXISTING COPPER HWR PIPING AND REPLACE WITH NEW CPVC SCHEDULE 80 PIPING FROM DOMESTIC HOT WATER STORAGE TANKS TO THE MAIN AS INDICATED IN DRAWINGS.
4. INSTALL INSULATION ON NEW CPVC SCHEDULE 80 PIPING.

No.	Date:	By	Revision
0	03/04/24	CJV	HOT WATER PIPING REPLACEMENT

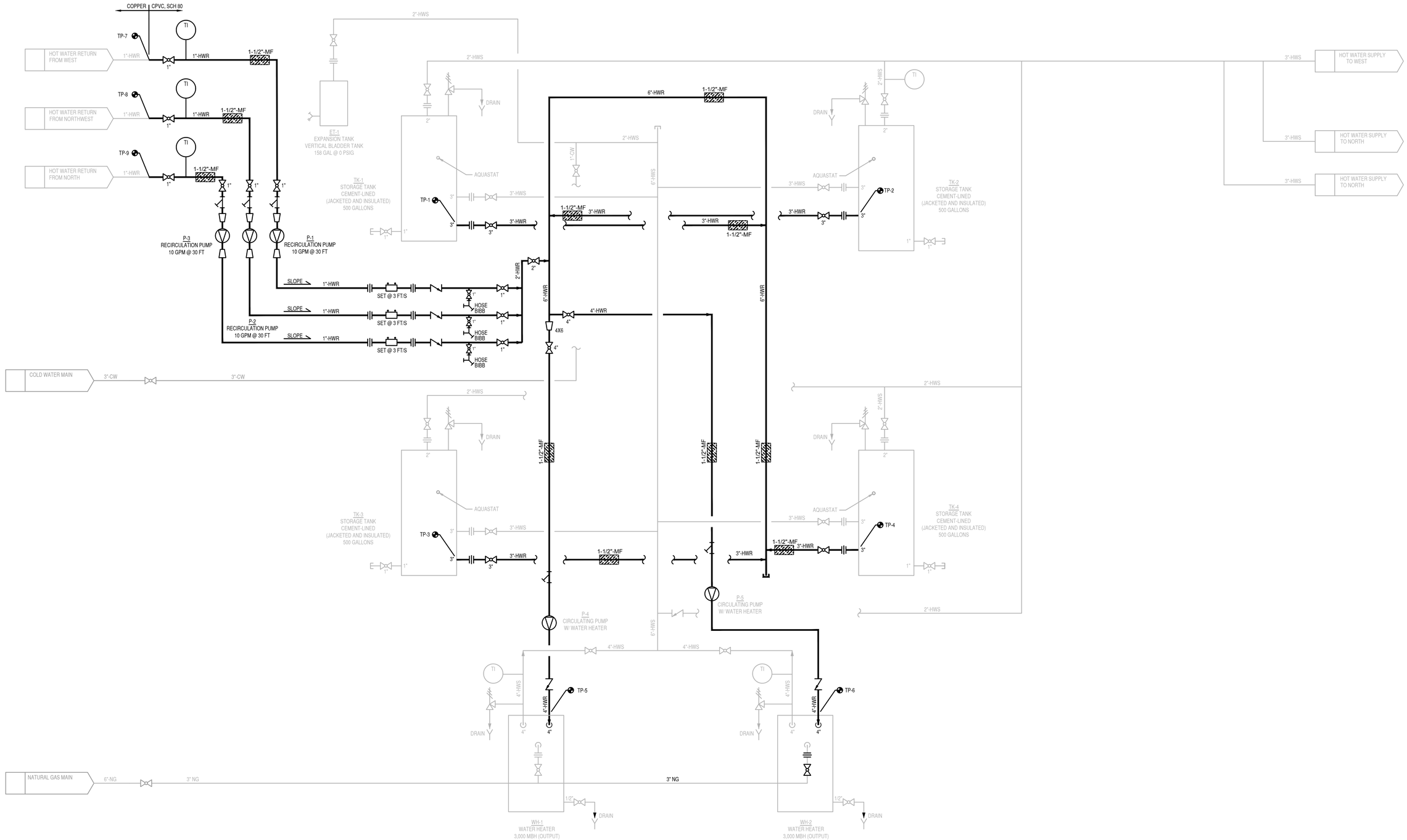
KFI ENGINEERS
221 3rd Avenue SE, Suite 100
Cedar Rapids, Iowa 52401
Tel: (319) 248-5333
Email: kfi@kfi-eng.com

Project Title:
IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES
IOWA MEDICAL CLASSIFICATION CENTER
HOT WATER PIPING REPLACEMENT
IOWA DAS #9180.01
CORALVILLE, IOWA

Sheet Title:
MECHANICAL
ENLARGED PLAN
HOT WATER STORAGE

Date: 01-16-2024
Drawn By: CJV
Checked By:
Project No.: 20-844
DWG. Scale: AS NOTED
Sheet Size: 24x36

Revision Number: 0
Sheet Number: M300



1 M700 DOMESTIC HOT WATER - NATURAL GAS WATER HEATER

NOT TO SCALE QMF NO. ISSUE NO.

No.	Date:	By	Revision
5	03/04/24	CJV	HOT WATER PIPING REPLACEMENT

No.	Date:	By	Revision
4	06/06/22	CJV	RECORD DRAWINGS
3	05/25/21	CJV	REBID R2
2	04/07/21	CJV	ADDENDUM #1
1	03/22/21	CJV	REBID
0	02/12/21	CJV	ISSUED FOR BID

KFI ENGINEERS
221 3rd Avenue SE, Suite 100
Cedar Rapids, Iowa 52401
Tel: (319) 248-5333
Email: kfi@kfi-eng.com

Project Title:
IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES
IOWA MEDICAL CLASSIFICATION CENTER
HOT WATER PIPING REPLACEMENT
IOWA DAS #9180.01
CORALVILLE, IOWA

Sheet Title:
MECHANICAL
PIPING & INSTRUMENTATION DIAGRAM
NATURAL GAS WATER HEATERS

Date: 01-16-2024
Drawn By: CJV
Checked By:
Project No.: 20-844
DWG. Scale: AS NOTED
Sheet Size: 24x36

Revision Number: 5

Sheet Number: M700

Exhibit C Facility Work Requirements

DOC IMCC Hot Water Piping Replacement
Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241
Request for Quote RFQ918001-01

Due Thursday, March 28, 2024 at 2:00 PM (CT)

PROJECT INFORMATION

Facility: Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241
DAS Project #: 9180.01
Owner: State of Iowa, Department of Administrative Services, Hoover State Office Building, Level 3, 1305 East
Walnut Street, Des Moines, IA 50319
Owner's Representative: Jennifer Kleene, Iowa Department of Administrative Services, 109 SE 13th Street, Des Moines, IA 50319
Construction Manager: Brian Polzin, The Samuels Group, 2929 Westown Parkway, Suite 200, West Des Moines, Iowa 50266

WORK HOUR RESTRICTIONS

A. Work hours outside of scheduled outages are from 7:00 AM to 3:00 PM, Monday through Friday unless arrangements are made in advance. No work shall be allowed on days recognized by State of Iowa as holidays.

CONTRACTOR USE OF SITE AND PREMISES

A. Provide access to and from site as required by law and Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permission of Owner and obtain permit if required.

B. Facility will be occupied at all times during duration of work. Contractor personnel shall conduct themselves in an agreeable manner at all times. Failure to do so may result in removal from the work site.

OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.
B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
C. Schedule the Work to accommodate Owner occupancy.

RULES FOR CONSTRUCTION WORKERS

A. The staff of the State of Iowa has a responsibility to protect the public by providing a secure environment. All work site rules must be followed to the letter, at all times.
B. Hot Work Permit Processes and Fire Watch, when necessary, will be adhered to for this project.
C. All State properties are tobacco free. No smoking will be permitted or tolerated on campus unless in designated areas.

D. You are permitted access only to the work site and no other area of the institution.
E. No drugs, alcohol, or firearms are allowed on the work site.
F. Do not leave money, drugs, alcohol, or firearms in your personal vehicle.
G. Company and personal vehicles are to be parked and locked in designated or authorized area of the work.
H. Secure all tools at the end of the day.
I. Maintain control of all tools, supplies, and debris at all times during the work.
J. Never leave keys in any vehicle.
K. Do not give anything to residents or take anything from residents; if they offer, inform your supervisor.
L. Secure all tools at the end of each day. Never leave tools unattended. All tools shall be checked in at the beginning of the day and checked out at the end of the day.
M. All delivery vehicles must go directly to the job site. Extra time should be anticipated for all deliveries. Provide 24-hour notice to the facility of deliveries.
N. During an emergency, follow the instructions of the security staff.
O. Contractor shall wear clothing of a different color, pattern, fashion, etc. as to distinguish themselves from inmates.

Exhibit D Sample Certification of Insurance

DOC IMCC Hot Water Piping Replacement
Iowa Medical and Classification Center (IMCC), Coralville, Iowa 52241
Request for Quote RFQ918001-01

Due Thursday, March 28, 2024 at 2:00 PM (CT)

SAMPLE

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): xx/xx/xxxx

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Agent's Information	
Agent's Name Agent's Address	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Company A (AM Best Rated A/VI or Better)	Admitted Carriers
INSURED Trade Contractor's Name Trade Contractor's Mailing Address	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS Minimum	
* A	COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:	X	X	#TBD- CGL	3/1/17	3/1/18	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ $ $1,000,000 $2,000,000 $1,000,000
B	AUTOMOBILE LIABILITY [X] ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	X	X	#TBD-AL	3/1/17	3/1/18	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
C	UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED RETENTION $	X	X	#TBD-UMB	3/1/17	3/1/18	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N [ ] If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	X	#TBD-WC	3/1/17	3/1/18	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$500,000 $500,000 $500,000
* E	Owners Contrators Protective Liability			#TBD-OCP	3/1/17	3/1/18	*Limits equal to CGL (or) as required by owner (Note- Would be either CGL or OCP, not both)	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Additional Insured on a Primary & Non-Contributory basis (CGL;AL;UMB/Excess) in favor of : (Owner) Iowa Department of Administrative Services (DAS), Officers, Directors, Members, Consultants, Agents, and Employees.
Waiver of Subrogation (CGL;AL;WC/EL;UMB/Excess) in favor of: (Owner) Iowa Department of Administrative Services (DAS), Officers, Directors, Members, Consultants, Agents, and Employees.

Project XXXX.XX (Number varies by project)

CERTIFICATE HOLDER

Iowa Department of Administrative Services (DAS)
109 SE 13th Street
Des Moines, IA 50319

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Signature