Mechanical and Plumbing specifications

I. General Provisions

A. General Conditions, Codes & Standards

1. General conditions of he contract found in the architectural drawings, general and special conditions of the American institute of architects (AIA) and any of the owner's general requirements shall apply unless noted otherwise.
2. Refer to the general conditions of the architectural documents and the general and special conditions of the AIA for additional requirements regarding; safety, coordination & cooperation, workmanship, protection, cutting and patching, damage to other work, preliminary operations, storage, adjustments, cleaning, etc.
3. All work shall be in conformance with all locally enforced, federal, state, and local codes and ordinances including any special the owner requirements in addition to those specified.
4. Contractor shall pay for and obtain all necessary licenses, permits and inspections required to proceed with the work. This shall include all required coordination with the local utility companies and their associated fees or costs.

B. Scope of work

1. This contract shall include the furnishing, installing, connecting and operation of all equipment which is a part of the mechanical and plumbing systems as shown on the drawings and as required by similar installations. Any material or labor which is neither shown on the drawings nor called for in the specifications, but which is necessary to complete the work and which is included in work of a similar character shall be furnished and installed under this contract and no additional cost to the owner. Contractor shall provide all labor and materials required to provide the owner a complete, code approved and operational machinal and plumbing systems.
2. Carefully read specification for all parts of the work so as to become familiar with all trade's work scope. Consult with other trades to ensure proper locations and avoid interferences. Any conflict shall be brought to the attention of the owner before work is commenced.
3. Contractors shall be held to have examined the premises and site so as to compare them with the drawings and specifications, note the existing conditions and other work that will be required, and the nature of the conditions under which the work is to be performed. No allowance shall be examination or of any error on his part.
4. All existing utility and mechanical services shall be field verified. Corrections to the design and installation shall be made without additional cost to the owner.
5. This contractor is responsible to coordinate the openings with the general trades' contractor. The final locations and sizes of all duct and louver openings shall be provided by this contractor.
6. This contract shall also include all labor, materials and miscellaneous expenses required for all required mechanical demolition of the existing areas being renovated.
   a. The demolitions shall consist of the complete removal (properly disposed of site unless otherwise noted) of all plumbing and HVAC equipment, piping, ductwork, materials, etc. not required in the final design and installation of the plumbing and HVAC systems for the new renovated areas.
   b. All underground services not being reused shall be capped below the floor.
   c. All above ground services shall be removed back to their respective main and capped or if the main is not required, the main shall be removed in its entirety.
   d. Coordinate all demolition with the architectural documents and the architect and the owner's general requirements.
7. All work including, but not limited to parts, material, equipment and labor shall be guaranteed for one year after acceptance by the engineer and owner. Where an equipment manufacturer has a warranty that exceeds one year, that warranty period shall apply to this project.

C. Documents

1. The drawings are diagrammatic, all work shall be performed as indicated on the drawings unless existing conditions or coordination issues require changes. These changes shall be made with no additional cost to the owner.
2. Any incidental items or labor, etc. not included in the specifications or the drawings but reasonably implied as necessary for the complete installation of all apparatus shall be including in bid.
3. The drawings and specifications are intended to supplement each other and any material or labor called for in one shall be furnished even though not mentioned in both.
4. If errors are found in the drawings or specifications or discrepancies occur between the same, or between the figures on the drawings, and the scale of same or between the larger and smaller drawings, or in the descriptive matter on the drawings shall be referred to the owner for review and final decision prior to the bid due date.
5. The bidding of this work will contemplate the use of equipment and materials exactly as specified herein. Where more than one manufacturer is mentioned any one may be utilized. Substitute manufacturers may be offered only as an alternate to the specified equipment and material and must be submitted as specified in the architectural documents.
6. Miscellaneous items necessary to complete the systems can be of any recognized manufacture provided these items meet minimum standards as set in these specifications. Refer to each section for any specific requirements.

D. Coordination

1. Contractor shall locate, identify and protect any existing services which are required to be maintained operational and shall exercise extra caution in the performance of all work to avoid disturbing such facilities. All contractor causing the damage.
2. Each contractor shall be held responsible for all damage to other work caused by his work or through the neglect of his or his sub-trade's personnel. All patching, repairing, replacement and painting, etc. shall be done as directed y the owner by the craftsmen of the trades involved. The costs of such work shall be paid by the contractor casing the damage.

E. Methods

1. Excavations shall be made in open trenches, floors shall be saw cut. Piping shall be laid on an appropriately graded 6" bed of clean and dry sand. Engineered fill shall be used to backfill to 6" above the piping. Backfill the remainder of the trench utilizing the excavated material if approved by the architect or the owner. If the excavated materials are not acceptable, engineered fill acceptable to the architect shall be utilized to backfill the remainder of the trench. Backfill shall be accomplished in 9" lifts with all lifts compacted to 95% proctor. Patch floor to match exiting.
2. Equipment, piping, ductwork, etc. shall not be supported from any ceilings, other piping, conduit or ductwork, roof deck, or joist bridging. Items shall be supported from acceptable structural biding components as determined by the architect and structural engineer.
3. All roof penetration, flashings and counter flashings shall be performed by the owner's roofing contractor at the requesting contractor's cost.

F. Submittals

1. Shop drawings shall be provided to the architect of all equipment and accessories provided for the project whether specified here-in or on the drawings, review of the shop drawings shall be for general design concept and adherence with the specifications. Quantity of shop drawings submitted shall be as specified by the architect. Shop drawings shall be prepared by the contractor showing locations and measurements from columns of all concealed and exposed piping, ductwork, conduit, equipment, accessories, etc., and submitted prior to installation. The owner may make reproducible copies of their drawings available for use in preparation of shop drawings, however the owner shall not be held responsible for not confirming all information on the drawings prior to fabrication and/or installation.
2. Project record documents – maintain at the jobsite one copy of all contact documents clearly marked as "project record copy". These drawings are to be maintain in good condition, updated daily for changes encountered and available at all times for inspection by the owner. Do not use for field construction! Project record documents are to be kept current with exact dimensions of all work, equipment, piping, valves, ductwork, etc. Mark all information in red lines and notes so as to be easily identified from the base drawing. Upon completion of the work, one set of these documents shall be turned over to the owner as one qualification for final payment.
3. After the balancing and acceptance tests are completed and accepted by the owner, three complete sets of as-built

II. Insulation

A. General

1. Installation shall conform to the manufacturer's recommendations, and in accordance with recognized industry practices.
2. Clean and dry surfaces proper to insulating.
3. Extend insulation without interruption through walls, floors, hangers and similar penetrations.
4. Insulation jacket and fitting cover must be plenum rated.
5. It is essential that the integrity of the vapor barrier by staples, hanger or where otherwise damaged.
6. Maintain access to balancing dampers and valves.
7. Insulation shall be by Owens-Corning, Knauf, or Manville.

C. Plumbing

1. All above ground piping shall be insulated with fiberglass piping insulation with an all-service jacket and self-sealing lap (ASJ/SSL).
   a. domestic hot and cold-water piping – 1 inch thick.
2. Fittings and valves shall be insulated with pre-molded fiberglass fittings and covered with a pre-formed PVC fitting cover.
3. See fixture specifications for barrier free requirements.

III. Plumbing

A. General

1. The entire plumbing installation, materials, equipment, etc. shall conform to the requirements of the locally enforced building code, the international plumbing code, the American disabilities act guidelines, ANSI A117.1 requirements for the physically challenged and the uniform federal accessibility standards (UFAS). Contactor to verify all plumbing rough in dimensions meet the above noted requirements, verify final rough in with architect prior to backfilling or wall installation.
2. Test all sewer and water piping in accordance with local codes and ordinances.
3. Furnish access doors for wall clean outs and valves in walls.
4. Fire stopping – refer to architectural drawings for wall type and UL construction design number. For rated masonry wall and floor assemblies, provide a UL approved through-penetration fire stop system number C-AJ-1175. For rated gypsum board assemblies, provide a UL approved through-penetration fire stop system number W-L-1003.

B. Piping

1. Pipe hangers for the plumbing system shall be adjustable clevis hangers with appropriate clamp. All piping shall be supported on a maximum spacing of:
   a. 6' centers for piping ¾" and smaller.
   b. 8' centers for 1" piping.
   c. 10' centers for piping larger than 1".
   d. Piping above the roof shall be supported per the detail on the drawings.
   e. Pipe hangers for insulated piping systems shall be sized for the gross outside dimension for the pipe and insulation. See insulation specifications for insulation requirements.

C. Sanitary and Vent

1. All piping shall pitch to its appropriate main at no less than 1/8" per foot slope.
2. Underground waste and vent piping shall be service weight cast iron hub and spigot pipe with compression gasket joints or PVC.
3. Above ground waste and vent piping shall be service weight cast iron no-hub pipe with stainless steel banded joints and be hung per C.I.S.P.I. requirements or PVC.
   a. PVC piping shall not be installed in a return air plenum.

D. Domestic Water

1. Test water piping to hydrostatic pressure of 100 PSIG. For two hours.
2. Above ground water piping shall be type "L" hard drawn copper pipe with wrought copper fittings and 95-5 soldered joints. As an alternate the contractor may utilize copper press fittings (Propress system) as manufactured by Viega. Fittings shall conform to the material and sizing requirements of ASME B16.18 or ASME B16.22. 0.Rings for fittings shall be EDPM. Installation of fittings shall conform to code and the manufacturer's specifications/requirements. Water piping joints between different materials shall be per the locally enforced plumbing code section 605.22.
   a. Domestic water valves shall Milwaukee valve #BA-150 ball valve.

11/11/2021

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ADVENTURE CAFE
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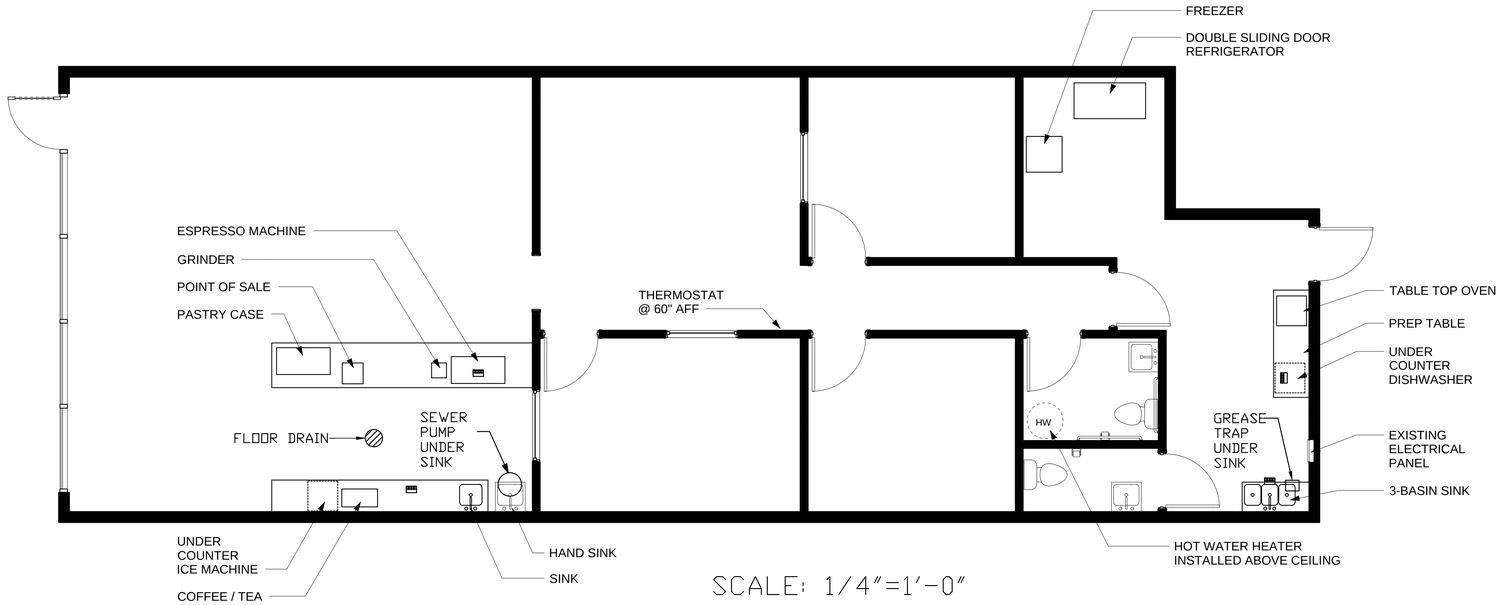
LEE'S SUMMIT, MO.

MEP.1

FLOOR SINK



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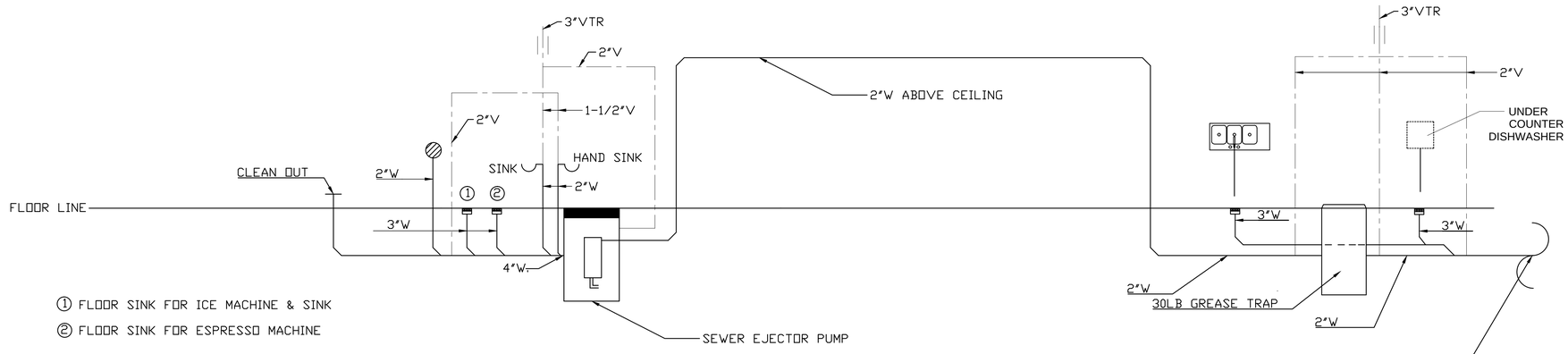
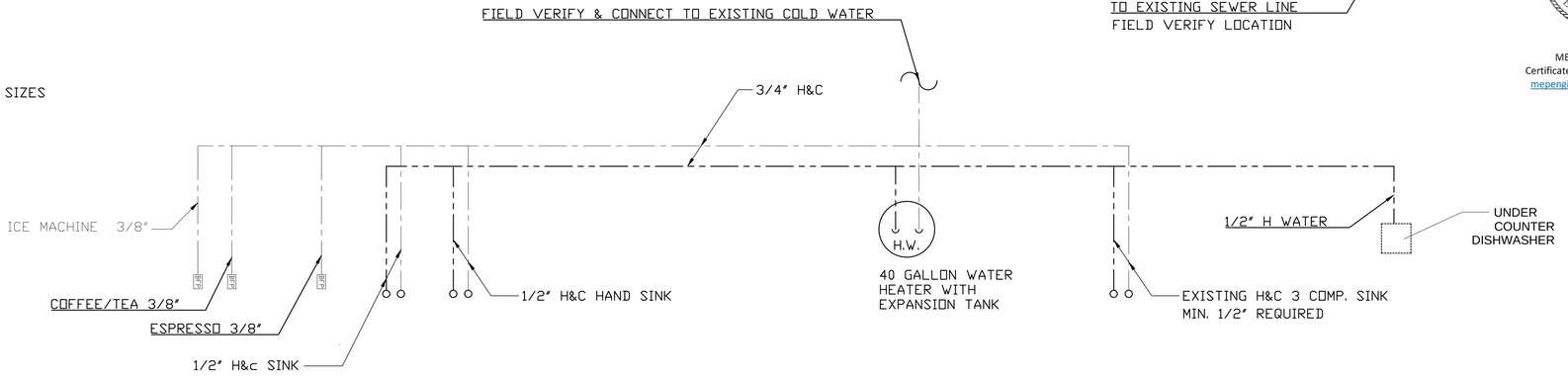


① FLOOR SINK FOR ICE MACHINE & SINK

② FLOOR SINK FOR ESPRESSO MACHINE

* CHECK OWNER'S EXISTING EQUIPMENT FOR CONNECTION SIZES

BFP BACK FLOW PREVENTER



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