DAVIS DESIGN

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ADDENDUM

PROJECT: University of South Dakota
Patterson Hall
Crystal Growth HVAC Package
Vermillion, South Dakota

ADDENDUM NUMBER

AD-1

ISSUED BY:

Matt Metcalf, Architect
Bryce Johnson, Mechanical Engineer

PROJECT #: 12-0103 / OSE # R0612-24X

DATE ISSUED: Thursday, August 16, 2012

This addendum is issued by the Architect to all known bidders before receipt of proposals, for the purpose of explaining, interpreting, or modifying the original plans and specifications. When enumerated by the bidder upon the proposal sheet, the information or instructions given hereon will be equally binding upon all parties as if included in the original plans and specifications.
BIDDER MUST ENTER THE NUMBER OF THIS ADDENDUM ON HIS PROPOSAL SHEET

THE FOLLOWING ITEMS ARE APPLICABLE TO THE SPECIFICATIONS:

AD-1, ITEM 1:

In reference to specification section 211313 – Wet-Pipe Sprinkler Systems, entire section is attached.

AD-1, ITEM 2:

In reference to specification section 230519 – Meters and Gages for HVAC Piping, under Article 3.4, delete Paragraph B.

AD-1, ITEM 3:

In reference to specification section 230716 – HVAC Equipment Insulation, under Article 2.1, Paragraph A shall read as follows:

A. Comply with requirements in "Equipment Insulation Schedule" articles for where insulating materials shall be applied.

AD-1, ITEM 4:

In reference to specification section 230716 – HVAC Equipment Insulation, under Article 3.6, delete Paragraph I including subparagraphs 1 and 2.

AD-1, ITEM 5:

In reference to specification section 232113 – Hydronic Piping, under Article 3.5, delete Paragraph D.

AD-1, ITEM 6:

In reference to specification section 230993 – Sequence of Operations for HVAC Controls, under Article 1.4, Paragraph B shall read as follows:

A. CH-1 (Typical of 1)

AD-1, ITEM 7:

In reference to specification section 232300 – Refrigerant Piping, delete entire section.

AD-1, ITEM 8:

In reference to specification section 232300 - HVAC Gravity Ventilators, under Article 2.3, Paragraph D, Sub-paragraph 2 shall read as follows:

2. Overall Height: 18 inches.

AD-1, ITEM 9:

In reference to specification section 235700 – Heat Exchangers, under Article 2.3, delete Paragraph A and associated subparagraphs.

THE FOLLOWING ITEMS ARE APPLICABLE TO THE DRAWINGS:

AD-1, ITEM 10:

In reference to Sheet P-105 – HVAC Package Plumbing Plans, see attached supplemental Drawings P-105.1 and P-105.2 for modifications to the plumbing plans.

AD-1, ITEM 11:

In reference to Sheet M-110 – 1st Floor New HVAC Plan, the OSE # on the title block shall be R0612-24X.

END AD-1

SECTION 211313 - WET-PIPE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Pipes, fittings, and specialties.

1.3 DEFINITIONS

A. Standard-Pressure Sprinkler Piping: Wet-pipe sprinkler system piping designed to operate at working pressure of 175 psig maximum.

1.4 PERFORMANCE REQUIREMENTS

A. Standard-Pressure Piping System Component: Listed for 175-psig minimum working pressure.

B. Delegated Design: Design sprinkler system(s), including comprehensive engineering analysis by a qualified professional, using performance requirements and design criteria indicated. Design shall meet the following codes and standards; NFPA 13, Owner's insurance company requirements, State Fire Marshall, and Local Authority having jurisdiction.

C. Sprinkler system design shall be approved by authorities having jurisdiction.

1. Margin of Safety for Available Water Flow and Pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For wet-pipe sprinkler systems. Include plans, elevations, sections, details, and attachments to other work.

C. Delegated-Design Submittal: For sprinkler systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Coordination Drawings: Sprinkler systems, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. HVAC ducts.
2. Items penetrating finished ceiling include the following:

    a. Lighting fixtures.
    b. Air outlets and inlets.

3. Items requiring coordination in rooms with exposed structure..

E. Approved Sprinkler Piping Drawings: Working plans, prepared according to NFPA 13, that have been approved by authorities having jurisdiction, including hydraulic calculations if applicable.

F. Operation and Maintenance Data: For sprinkler specialties to include in emergency, operation, and maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer's responsibilities include designing, fabricating, and installing sprinkler systems and providing professional services needed to assume responsibility. Base calculations on results of fire-hydrant flow test.

B. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing shall comply with the following:

1. NFPA 13, "Installation of Sprinkler Systems."

1.7 PROJECT CONDITIONS

A. The sprinkler contractor shall pay for all permits and inspections required.

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

2.2 STEEL PIPE AND FITTINGS

A. Standard Weight, Schedule 40 Galvanized andBlackSteel Pipe: ASTM A 53/A 53M, Type EGrade B. Pipe ends may be factory or field formed to match joining method.

B. Schedule 10, Black-Steel Pipe: ASTM A 135 or ASTM A 795/A 795M, Schedule 10 in NPS 5 and smaller; and NFPA 13-specified wall thickness in NPS 6 to NPS 10, plain end.

C. Black-Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M, standard-weight, seamless steel pipe with threaded ends.

D. Galvanized andUncoated Steel Couplings: ASTM A 865, threaded.

E. Galvanized andUncoated Gray-Iron Threaded Fittings: ASME B16.4, Class 125, standard pattern.

F. Grooved-Joint, Steel-Pipe Appurtenances:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Anvil International, Inc.
    b. National Fittings, Inc.
    c. Tyco Fire & Building Products LP.
    d. Victaulic Company.

2. Pressure Rating: 175 psig minimum.
3. Uncoated Grooved-End Fittings for Steel Piping: ASTM A 47/A 47M, malleable-iron casting or ASTM A 536, ductile-iron casting; with dimensions matching steel pipe.
4. Grooved-End-Pipe Couplings for Steel Piping: AWWA C606 and UL 213, rigid pattern, unless otherwise indicated, for steel-pipe dimensions. Include ferrous housing sections, EPDM-rubber gasket, and bolts and nuts.

2.3 TRIM AND DRAIN VALVES

A. General Requirements:

1. Standard: UL's "Fire Protection Equipment Directory" listing or "Approval Guide," published by FM Global, listing.
2. Pressure Rating: 175 psig minimum.

B. Angle Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Kennedy Valve, a division of McWane, Inc.
    b. NIBCO, INC.
    c. United Brass Works, Inc.

C. Ball Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Anvil International, Inc.
   b. Conbraco Industries, Inc.; Apollo Valves.
   c. Fire-End & Croker Corporation.
   d. Jomar International, Ltd.
   e. Kennedy Valve; a division of McWane, Inc.
   f. Milwaukee Valve Company.
   g. NIBCO INC.
   h. Potter Roemer.
   i. Tyco Fire & Building Products LP.
   j. Victaulic Company.
   k. Watts Water Technologies, Inc.

2.4 SPRINKLER SPECIALTY PIPE FITTINGS

A. Branch Outlet Fittings:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   a. Anvil International, Inc.
   b. Tyco Fire & Building Products LP.
   c. Victaulic Company.

2. Standard: UL 213.
3. Pressure Rating: 175 psig minimum.
4. Body Material: Ductile-iron housing with EPDM seals and bolts and nuts.
5. Type: Mechanical-T and -cross fittings.
6. Configurations: Snap-on and strapless, ductile-iron housing with branch outlets.
7. Size: Of dimension to fit onto sprinkler main and with outlet connections as required to match connected branch piping.
8. Branch Outlets: Grooved, plain-end pipe, or threaded.

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. Locations and Arrangements: Drawing plans, schematics, and diagrams indicate general location and arrangement of piping. Install piping as indicated, as far as practical.

1. Deviations from approved working plans for piping require written approval from authorities having jurisdiction. File written approval with Architect before deviating from approved working plans.

B. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13.

C. Use listed fittings to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.

D. Install sprinkler piping with drains for complete system drainage.

E. Install hangers and supports for sprinkler system piping according to NFPA 13. Comply with requirements for hanger materials in NFPA 13.

F. Fill sprinkler system piping with water.

G. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 210517 "Sleeves and Sleeve Seals for Fire-Suppression Piping."

H. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 210518 "Escutcheons for Fire-Suppression Piping."

3.2 JOINT CONSTRUCTION

A. Install couplings, flanges, flanged fittings, unions, nipples, and transition and special fittings that have finish and pressure ratings same as or higher than system's pressure rating for aboveground applications unless otherwise indicated.

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

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

D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.

E. Steel-Piping, Cut-Grooved Joints: Cut square-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe joints.

F. Steel-Piping, Roll-Grooved Joints: Roll rounded-edge groove in end of pipe according to AWWA C606. Assemble coupling with housing, gasket, lubricant, and bolts. Join steel pipe and grooved-end fittings according to AWWA C606 for steel-pipe grooved joints.

G. Dissimilar-Material Piping Joints: Make joints using adapters compatible with materials of both piping systems.

3.3 IDENTIFICATION

A. Install labeling and pipe markers on equipment and piping according to requirements in NFPA 13.

B. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.4 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
2. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.

C. Sprinkler piping system will be considered defective if it does not pass tests and inspections.

3.5 PIPING SCHEDULE

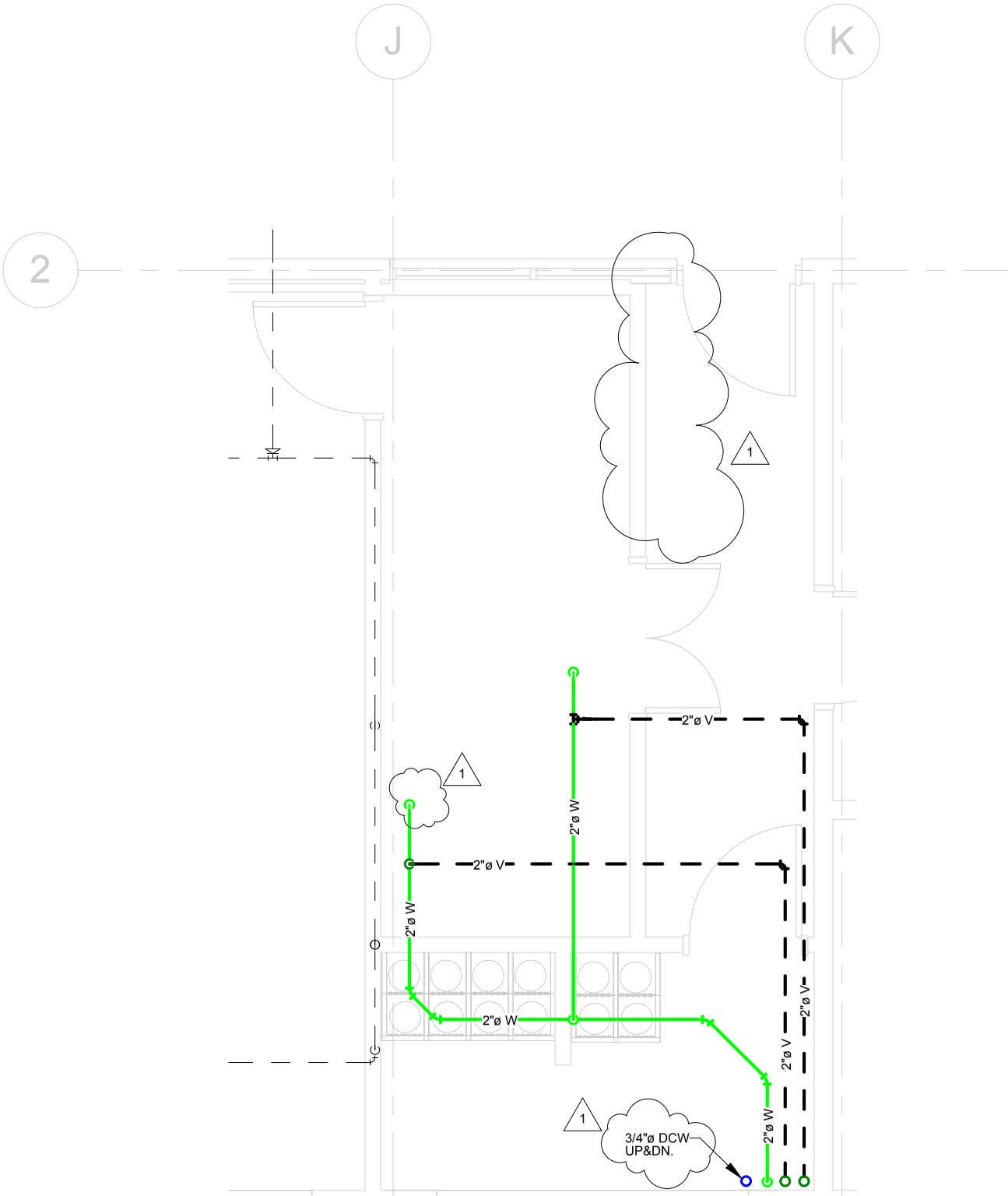
A. Standard-pressure, wet-pipe sprinkler system, NPS 2 and smaller, shall be the following:

1. Standard-weight, Schedule 40, black-steel pipe with threaded ends; uncoated, gray-iron threaded fittings; and threaded joints.

B. Standard-pressure, wet-pipe sprinkler system, NPS 2-1/2 and Larger , shall be one of the following:

1. Standard-weight, black-steel pipe with cut- or roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.
2. Standard-weight, black-steel pipe with plain ends; steel welding fittings; and welded joints.
3. Schedule 10 black-steel pipe with roll-grooved ends; uncoated, grooved-end fittings for steel piping; grooved-end-pipe couplings for steel piping; and grooved joints.
4. Schedule 10 black-steel pipe with plain ends; welding fittings; and welded joints.

END OF SECTION 211313



1 Revised 1st Floor Plan - Plumbing
1/4" = 1'-0"

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CLIENT INFORMATION
The University of South Dakota

PROJECT INFORMATION
Revised 1st Floor Plan - Plumbing

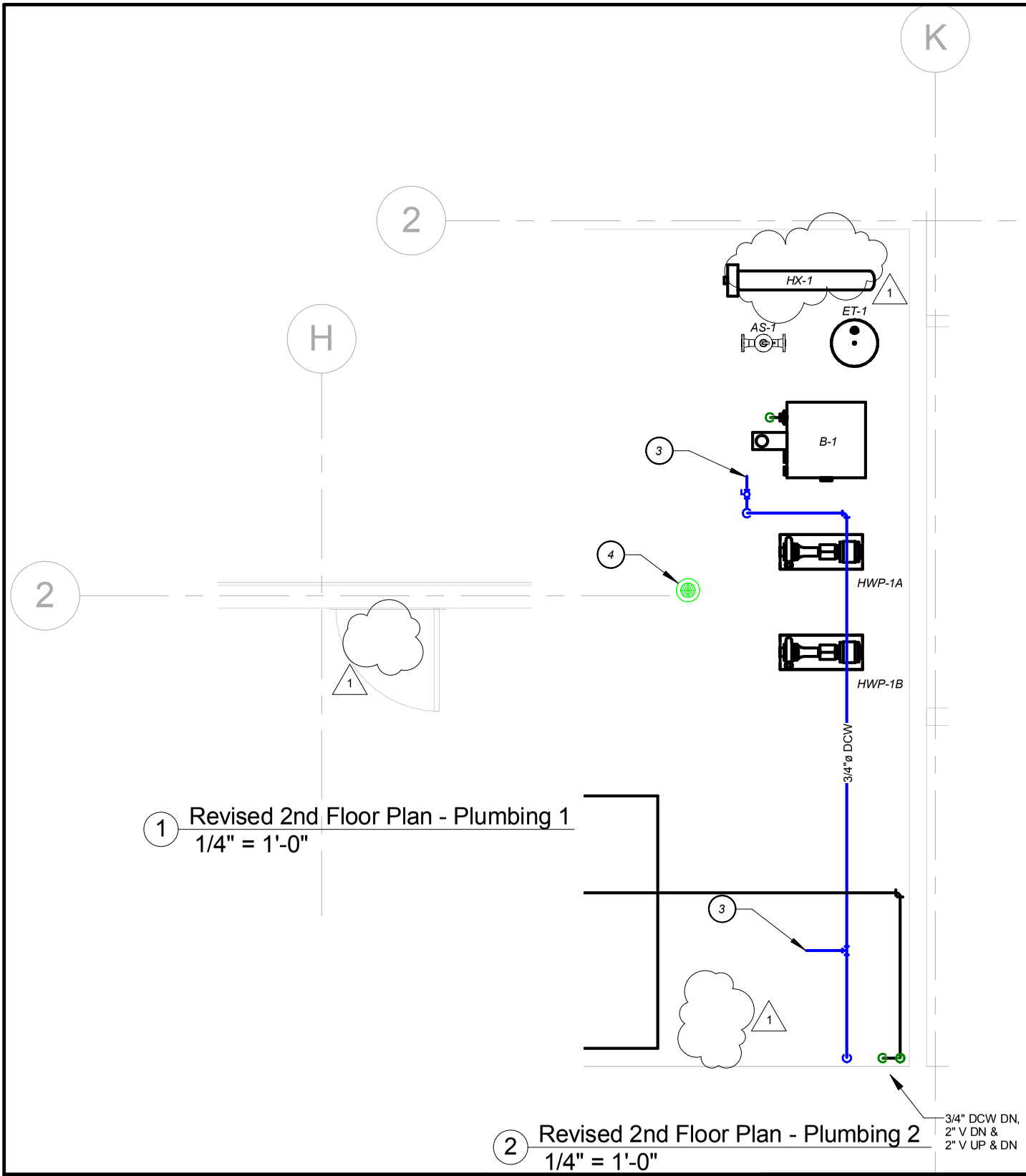
Vermillion South Dakota

Issue Date:	08/14/12
Job #	12-0049/12-0068
Drawn by:	DRS

Drawing Title
HVAC Package - Plumbing Plans

From Sheet | for CA use:

Drawing # P-105.1



1 Revised 2nd Floor Plan - Plumbing 1
1/4" = 1'-0"

2 Revised 2nd Floor Plan - Plumbing 2
1/4" = 1'-0"

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CLIENT INFORMATION
The University of South Dakota

PROJECT INFORMATION
Revised 2nd Floor Plans - Plumbing

Vermillion South Dakota

Issue Date:	08/14/12
Job #	12-0049/12-0068
Drawn by:	DRS

Drawing Title
HVAC Package - Plumbing Plans

From Sheet

for CA use:

Drawing # P-105.2