

ADDENDUM NO. 2

New Augusta Public Academy North – Heat Pump Replacement

Project No. 223039.00

MSD of Pike Township
Indianapolis, Indiana

Index of Contents

Addendum No. 2, 8 Items

Revised Project Manual, Document 00 01 10 – Table of Contents

Revised Project Manual, Document 00 41 16 – Bid Form

New Project Manual, Section 01 23 00 – Alternates

New Project Manual, Section 23 25 00 – HVAC Water Treatment

Revised Drawing Sheets: M-502

Date: May 2, 2024

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2 to Drawings and Project Manual, dated April 5, 2024, for MSD of Pike Township, 3950 W. 56th Street, Indianapolis, Indiana 46278; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana. This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. PROJECT MANUAL, TABLE OF CONTENTS

- A. Page 00 01 10-1, DIVISION 01: Add Section 01 23 00 – Alternates.
- B. Page 00 01 10-2, DIVISION 23: Add Section 23 25 00 – HVAC Water Treatment.

ITEM NO. 2. PROJECT MANUAL, SECTION 00 41 16 – CONTRACTOR'S BID FOR PUBLIC WORK (BID FORM)

- A. The Bid Form has been revised for this Project. This revised form, dated 5-2-24, is the applicable form to be used by all bidders and is included with and hereby made a part of this Addendum. Revision includes the addition of Alternate No. 1.

ITEM NO. 3. REVISED PROJECT MANUAL SECTIONS

- A. Document 00 01 10 – Table of Contents and Document 00 41 16 – Bid Form have been revised, dated 5-2-24 are included with and hereby made a part of this Addendum.

ITEM NO. 4. NEW PROJECT MANUAL SECTIONS

- A. New Project Manual Sections 01 23 00 – Alternates and Section 23 25 00 – HVAC Water Treatment are included with and hereby made a part of this Addendum.

ITEM NO. 5. PROJECT MANUAL, SECTION 23 09 00 – INSTRUMENTATION AND CONTROL FOR HVAC

- A. Remove the following section and associated subsections: 2.7, I., 6.

ITEM NO. 6. PROJECT MANUAL, SECTION 23 09 93 – HVAC SEQUENCE OF OPERATION

- A. Revise 2.7E subsections of the specification as follows:
 - “E. Electronic Duct Temperature Sensors
 - 1. All duct sensors shall be installed within metal enclosures that are suitable for the application.
 - 2. AHU/MAU Duct Sensors
 - a. All duct sensors shall be true averaging type sensors with capillary lengths not less than 20 feet long. The only exceptions will be return air and outdoor air sensors. TCC to ensure proper air dispersion over installed capillary length for accurate reading.”

ITEM NO. 7. PROJECT MANUAL, SECTION 23 21 13 – HYDRONIC PIPING

A. Revise 3.9B subsection of the specification as follows:

“B. Cleaning Sequence

1. Add cleaner to closed systems at concentration recommended by manufacturer.
2. WSHP Systems: Circulate for 48 hours, then drain systems as quickly as possible. Refill with clean water, circulate for 24 hours, then drain. Refill with clean water and repeat until system cleaner is removed.
3. Use neutralizer agents on recommendation of system cleaner supplier and approval of A/E.
4. Remove, clean, and replace strainer screens.
5. Inspect, remove sludge, and flush low points with clean water after cleaning process is completed. Include disassembly of components as required.”

B. Revise 3.9C subsection of the specification as follows:

“C. Closed System Treatment and Cleaning

1. Utilize existing shot feeder to treat closed hydronic system loops.”

ITEM NO. 8. REVISED DRAWINGS SHEETS

A. Drawing Sheets: M-502 has been revised, dated 5/02/24, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

DOCUMENT 00 01 10 - TABLE OF CONTENTS

INTRODUCTORY INFORMATION

00 01 01	Project Title Page
00 01 10	Table of Contents

SPECIFICATIONS

BIDDING REQUIREMENTS, CONTRACTOR FORMS AND CONDITIONS OF THE CONTRACT

00 11 13	Advertisement for Bids
00 21 13	Instructions To Bidders
00 26 00.00	Procurement Substitution Procedures
00 26 00.01	Substitution Request Form (During Procurement)
00 31 00	Available Project Information
00 41 16	Contractor's Bid for Public Works (Bid Form)
00 43 13	Bid Security Form - BID BOND (AIA A310-20101)
00 52 00	Agreement Forms - STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR (AIA A101-2017)
00 61 00	Bond Forms - PERFORMANCE BOND AND PAYMENT BOND (AIA 312-2010)
00 72 00	General Conditions - AIA GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (AIA A201-2017)
00 73 10	Employment Eligibility Verification
00 73 18	Insurance Requirements - Certificate of Insurance

DIVISION 01: GENERAL REQUIREMENTS

01 10 00	Summary
01 21 00	Allowances
01 23 00	Alternate
01 26 00	Contract Modification Procedures
01 29 00	Payment Procedures
01 31 00	Project Management and Coordination
01 31 00.15	Request for Interpretation (F/H)
01 32 00	Construction Progress Documentation
01 33 00	Submittal Procedures
01 33 00.03	Digital Data Transmittal
01 42 00	References
01 50 00	Temporary Facilities and Controls
01 57 19	Indoor Air Quality Management (During Construction)
01 60 00	Product Requirements
01 73 00	Execution
01 73 29	Cutting and Patching
01 74 13	Construction Cleaning
01 77 00	Closeout Procedures

DIVISION 02: EXISTING CONDITIONS

02 41 19	Selective Demolition
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DIVISION 07: THERMAL AND MOISTURE PROTECTION

07 84 13	Penetration Firestopping
07 84 43	Joint Firestopping

DIVISION 23: HEATING, VENTILATING, AND AIR CONDITIONING

23 05 00	Common Work Results for HVAC
23 05 13	Common Motor Requirements for HVAC Equipment
23 05 19	Meters and Gages for HVAC Piping
23 05 23	General-Duty Valves for HVAC Piping
23 05 29	Hangers and Supports for HVAC Piping and Equipment
23 05 48	Vibration and Seismic Controls for HVAC Piping and Equipment
23 05 53	Identification for HVAC Piping and Equipment
23 05 93	Testing, Adjusting, and Balancing for HVAC
23 07 00	HVAC Insulation
23 09 00	Instrumentation and Control for HVAC
23 09 93	HVAC Sequence of Operation
23 21 13	Hydronic Piping
23 31 13	Metal Ducts
23 33 00	Air Duct Accessories
23 25 00	<i>HVAC Water Treatment</i>
23 81 00	Water Source Heat Pumps

DIVISION 26: ELECTRICAL

26 00 05	Electrical Demolition
26 00 50	General Electrical Requirements
26 05 19	Low-Voltage Electrical Power Conductors and Cables
26 05 26	Grounding and Bonding for Electrical Systems
26 05 29	Hangers and Supports for Electrical Systems
26 05 33	Conduit and Boxes for Electrical Systems
26 05 53	Identification for Electrical Systems
26 28 13	Fuses
26 28 16	Enclosed Switches and Circuit Breakers

END OF TABLE OF CONTENTS

BASE BID:

For the sum of _____
(sum in words)

DOLLARS \$ _____
(sum in figures)

Bidder has reviewed the Construction Schedule and the intent of the schedule can be met.

_____ Yes

_____ No

PROPOSAL TIME

Bidder agrees that this Bid shall remain in force for a period of sixty (60) consecutive calendar days from the due date, and Bids may be accepted or rejected during this period. Bids not accepted within said 60 consecutive calendar days shall be deemed rejected.

The undersigned acknowledges receipt of the following Addenda:

Receipt of Addenda No(s). _____

Attended pre-bid conference	YES	NO
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Has visited the jobsite	YES	NO
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The undersigned further agrees to furnish a bond or certified check with this Bid for an amount specified in the notice of the letting. If alternate bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addenda attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS
(If applicable)

I, the undersigned Bidder or agent as a Contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this Project will use U.S. steel products on this Project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, _____, subject to the following conditions: _____

Contracting Authority Members:

_____	_____
_____	_____
_____	_____

PART II

(For projects of \$100,000 or more – IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm): _____

Date: _____

These statements to be submitted under oath by each Bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I - EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completed Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II - PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed Work. (Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)
2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.
3. If you intend to sublet any portion of the Work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify all governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.
4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.
5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of Bidder's financial statement is mandatory. Any Bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the Contract must be specific enough in detail so that said governing body can make a proper determination of the Bidder's capability for completing the Project if awarded.

SECTION IV – CONTRACTOR'S NON-COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT.

Dated at _____ this _____ day of _____, _____

(Name of Organization)

By _____

(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
)SS:
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named _____
and swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____, 20_____.

Notary Public

My Commission Expires: _____

County of Residence: _____

BIDDER REMINDER LIST TO BE COMPLETED AND INCLUDED
IN BID PACKAGE FOR REVIEW AT BID OPENING

	YES	NO
Have you properly and completely executed the Form No. 96 (Format) Bid Form (Section 004116)?		
Have you included your company's Financial Statement (Part II, Sect. III)?		
Note that the Non-Collusion Affidavit is part of the new Bid Form and is to be notarized.		
Have you enclosed a certified check or Bid Bond? (Note: bond must be signed by Surety and Principal)		
Have you indicated the Project Name, Bid Category No., and Description on the outside of your Bid envelope?		

NOTE: IF ANY OF THE REQUIRED BIDDING DOCUMENTS ARE NOT INCLUDED, DATED, PROPERLY EXECUTED, THE CONTRACTOR'S BID MAY NOT BE ACCEPTED.

END OF DOCUMENT 00 41 16

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on Bid Form for certain work defined in Bidding Requirements that may be added to or deducted from Base Bid amount if Owner decides to accept a corresponding change either in quantity of construction to be completed or in products, materials, equipment, systems, or installation methods described in Contract Documents.
 - 1. The cost or credit for each alternate is net addition to or deduction from Contract Sum to incorporate alternate into Work. No other adjustments are made to Contract Sum.
 - 2. Alternates described in this Section are part of Work only if enumerated in Agreement.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of Contract, notify each entity involved, in writing, of status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under same conditions as other work of Contract.
- D. Schedule: A Schedule of Alternates is included at end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Provide Basis of Design Manufacturer for Water Source Heat Pumps (WSHP) per Specification Section 23 81 00 if not already included in the Base Bid.

END OF SECTION 01 23 00

SECTION 23 25 00 - HVAC WATER TREATMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following HVAC water-treatment systems:
 - 1. HVAC water-treatment chemicals.

1.2 DEFINITIONS

- A. EEPROM: Electrically erasable, programmable read-only memory.
- B. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.
- C. TDS: Total dissolved solids.

1.3 PERFORMANCE REQUIREMENTS

- A. Water quality for HVAC systems shall minimize corrosion, scale buildup, and biological growth for optimum efficiency of HVAC equipment without creating a hazard to operating personnel or the environment.
- B. Base HVAC water treatment on quality of water available at Project site, HVAC system equipment material characteristics and functional performance characteristics, operating personnel capabilities, and requirements and guidelines of authorities having jurisdiction.

1.4 INFORMATIONAL/QUALITY ASSURANCE/CONTROL SUBMITTALS

- A. Other Informational Submittals:
 - 1. Water-Treatment Program: Written sequence of operation on an annual basis for the application equipment required to achieve water quality defined in the "Performance Requirements" Article above.
 - 2. Water Analysis: Illustrate water quality available at Project site.
 - 3. Passivation Confirmation Report: Verify passivation of galvanized-steel surfaces, and confirm this observation in a letter to Architect.

1.5 CLOSEOUT DOCUMENTS

- A. General: Closeout Submittals are to be submitted with O and M Manuals only. Do not submit with other ACTION and INFORMATIONAL Submittals:
 - 1. Operation and Maintenance Data: For sensors, injection pumps, and controllers to include in emergency, operation, and maintenance manuals.

1.6 QUALITY ASSURANCE

- A. HVAC Water-Treatment Service Provider Qualifications: An experienced HVAC water-treatment service provider capable of analyzing water qualities, installing water-treatment equipment, and applying water treatment as specified in this Section.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.7 MAINTENANCE SERVICE

- A. Scope of Maintenance Service: Provide chemicals and service program to maintain water conditions required above to inhibit corrosion, scale formation, biological growth, and glycol concentration for cooling chilled-water piping, heating-hot-water piping, heating, steam and condensate piping, condenser-water piping, and equipment. Services and chemicals shall be provided for a period of one year from date of Substantial Completion, and shall include the following:
1. Initial water analysis and HVAC water-treatment recommendations.
 2. Startup assistance for Contractor to flush the systems, clean with detergents, and initially fill systems with required chemical treatment prior to operation.
 3. Periodic field service and consultation. Test systems every 2 months, unless noted otherwise.
 4. Customer report charts and log sheets.
 5. Laboratory technical analysis.
 6. Analyses and reports of all chemical items concerning safety and compliance with government regulations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Ampion Corp.
 2. Anderson Chemical Co, Inc.
 3. Aqua-Chem, Inc.; Cleaver-Brooks Div.
 4. Aqua-Science
 5. Barclay Chemical Co.; Water Management, Inc.
 6. Boland Trane Services
 7. Don Chemical Co.
 8. Enerco
 9. GE Betz.
 10. GE Osmonics.
 11. H-O-H Chemicals, Inc.
 12. Interstate Chemical Company, Inc.
 13. Marathon/Chem-Aqua
 14. Metro Group. Inc. (The); Metropolitan Refining Div.
 15. Ohio Chemical
 16. ONDEO Nalco Company.
 17. Protocol
 18. Union Carbide Corp.
 19. Watcon, Inc.
 20. Zinkan Enterprises, Inc.: ChemREADY.

2.2 CHEMICALS

- A. Chemicals shall be as recommended by water-treatment system manufacturer that are compatible with piping system components and connected equipment, and that can attain water quality specified in Part 1 "Performance Requirements" Article.

PART 3 - EXECUTION

3.1 WATER ANALYSIS

- A. Perform an analysis of supply water to determine quality of water available at Project site.

3.2 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Perform tests and inspections and prepare test reports.
 - 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- C. Tests and Inspections:
 - 1. Inspect field-assembled components and equipment installation, including piping and electrical connections.
 - 2. Inspect piping and equipment to determine that systems and equipment have been cleaned, flushed, and filled with water, and are fully operational before introducing chemicals for water-treatment system.
 - 3. Add water chemicals to the existing shot feeder as specified above.
 - 4. Do not enclose, cover, or put piping into operation until it is tested and satisfactory test results are achieved.
 - 5. Test for leaks and defects. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
 - 6. Leave uncovered and unconcealed new, altered, extended, and replaced water piping until it has been tested and approved. Expose work that has been covered or concealed before it has been tested and approved.
 - 7. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source and allow test pressure to stand for four hours. Leaks and loss in test pressure constitute defects.
 - 8. Repair leaks and defects with new materials and retest piping until no leaks exist.
- D. Remove and replace malfunctioning units and retest as specified above.
- E. Sample boiler water at one-week intervals after boiler startup for a period of five weeks and prepare test report advising Owner of changes necessary to adhere to Part 1 "Performance Requirements" Article for each required characteristic. Sample boiler water at eight-week intervals following the testing noted above to show that chemicals maintaining water quality within performance requirements specified in this Section.
- F. At eight-week intervals following Substantial Completion and during warranty period, perform separate water analyses on hydronic systems to show that chemicals systems are maintaining water quality within performance requirements specified in this Section. Submit written reports of water analysis advising Owner of changes necessary to adhere to Part 1 "Performance Requirements" Article.
- G. Comply with ASTM D 3370 and with the following standards:
 - 1. Silica: ASTM D 859.
 - 2. Steam System: ASTM D 1066.
 - 3. Acidity and Alkalinity: ASTM D 1067.
 - 4. Iron: ASTM D 1068.
 - 5. Water Hardness: ASTM D 1126.

3.3 DEMONSTRATION


- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain HVAC water-treatment systems and equipment. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 23 25 00



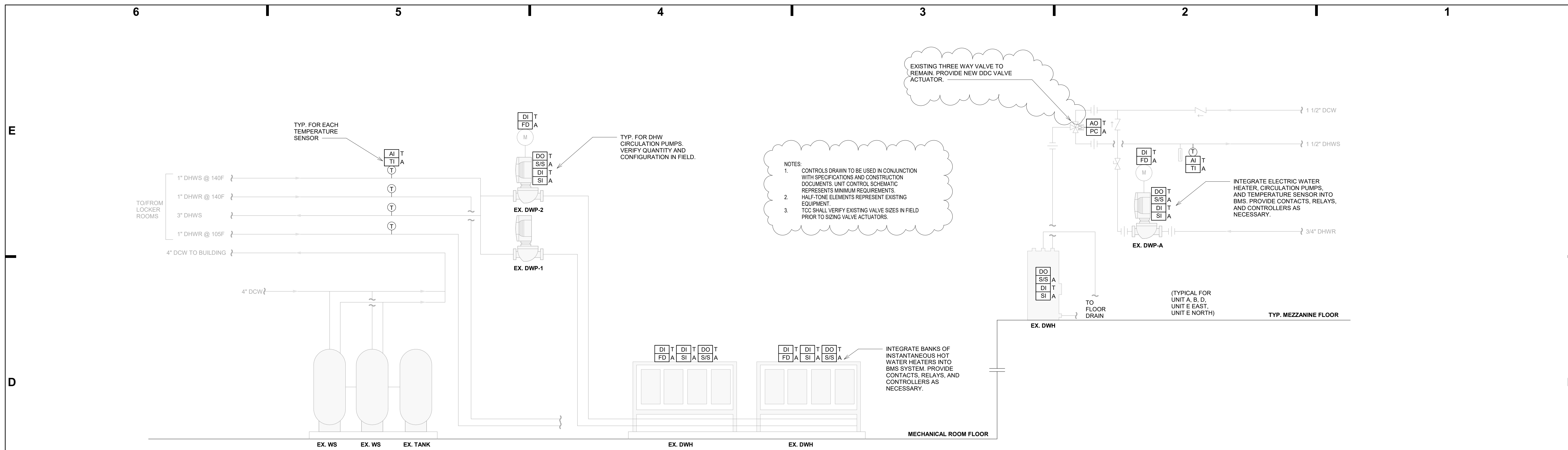
DRAWN BY: JDS

PROJECT NUMBER: 223039.00
PROJECT ISSUE DATE: 04.05.2024

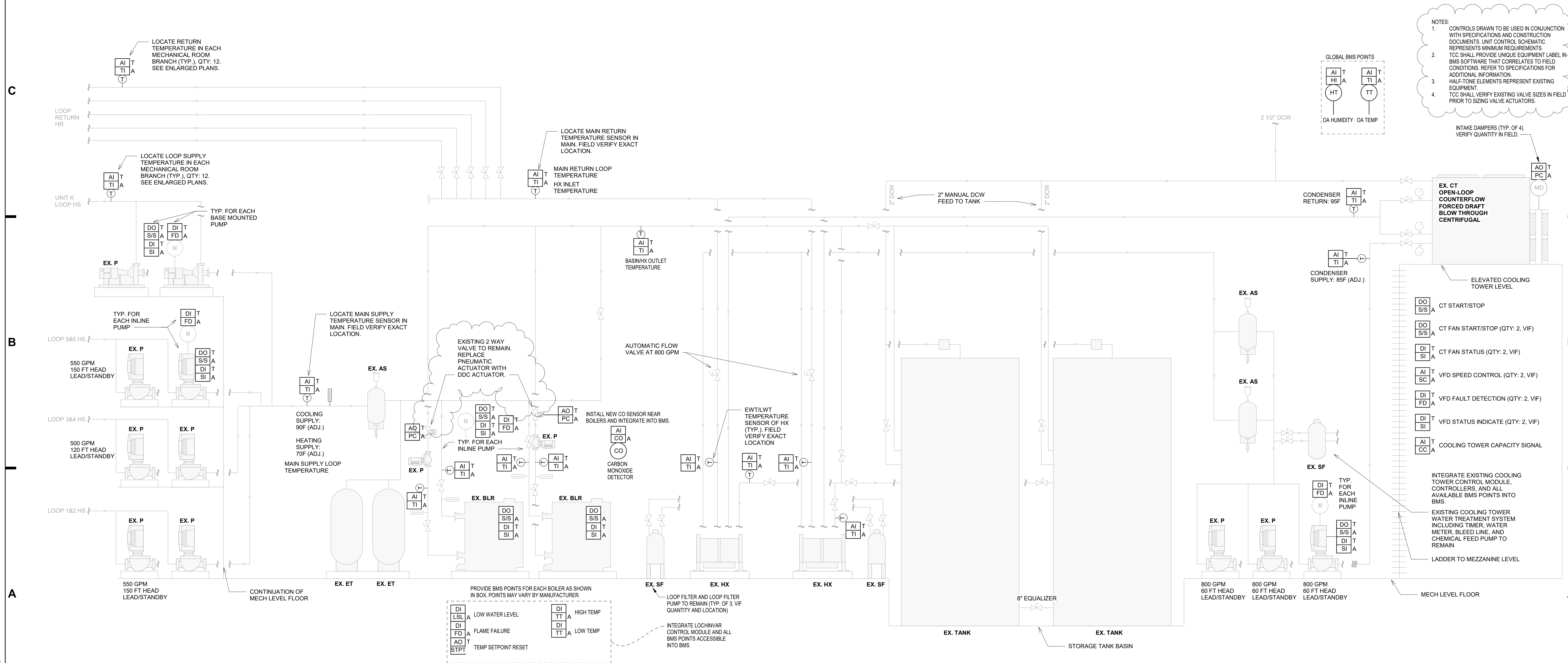
REV. NO. 	DESCRIPTION	DATE
1	CONSTRUCTION DOCUMENTS	04.05.2024
2	ADDENDUM 002	05.02.2024

MECHANICAL SCHEMATICS

M-502



6D DOMESTIC HOT WATER CONTROL SCHEMATIC
NOT TO SCALE



6A **CLOSED LOOP/HEAT EXCHANGER - OPEN CIRCUIT COOLING TOWER -
CONDENSING BOILER - CONTROL SCHEMATIC**