



ADDENDUM 3

Project:	SFC-100279.01 Vanguard-Sentinel CTC HVAC Replacement
Date:	05/14/2025
Prepared for:	Bidders
Prepared By:	Wright Engineering LLC

This Addendum shall become part of the Contract Documents and clarifies, amends, or interprets the original Bidding Documents dated 04/24/2025. Bidders shall acknowledge receipt of this Addendum in their bid proposal. Failure to acknowledge receipt of this addendum may cause the bid to be rejected.

General Notes:

1. The Bid Due Date has been extended to **05/23/2025 at 11:00 am**. Bids will be due to Bid Express as before.
2. Existing R-410a refrigerant Safety Data Sheet provided for reference (as supplied by service contractor). If existing conditions are found to vary from this, Bidding Contractor shall respond appropriately with no additional costs to Owner.

Revisions

Drawing / Spec	Revision Description
00 41 13 - Bid Form	1. Revised Bid Due Date
M4.B	1. Bid Alternate Scope clarifications added.
M4.R	1. Chilled water main valving embellished.
M5.1	1. Pipe support detail revised.

List of Attachments:

1. SDS-R410a Sheet(s)
2. Specification Sections as Listed Above
3. Drawings as Listed Above



NATIONAL REFRIGERANTS, INC.

R-410A

Safety Data Sheet

R-410A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-410A
OTHER NAME: Difluoromethane, Pentafluoroethane
USE: Refrigerant Gas

DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

CLASSIFICATION:	Gases under pressure, Liquefied Gas	
SIGNAL WORD:	WARNING	
HAZARD STATEMENT:	Contains gas under pressure, may explode if heated	
SYMBOL:	Gas Cylinder	
PRECAUTIONARY STATEMENT:	STORAGE: Protect from sunlight, store in a well-ventilated place	

EMERGENCY OVERVIEW: Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-410A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None known.



3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Difluoromethane	75-10-5	50
Pentafluoroethane	354-33-6	50

COMMON NAME and SYNONYMS

R-410A; HFC410A

There are no impurities or stabilizers that contribute to the classification of the material identified in Section 2

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention. Do not give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. Do not induce vomiting unless instructed to do so by a physician.

ADVICE TO PHYSICIAN: Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Gas, not applicable per DOT regulations
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	>750°C
UPPER FLAME LIMIT (volume % in air):	None by ASTM D-56-82
LOWER FLAME LIMIT (volume % in air):	None by ASTM E-681
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)



UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-410A is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources. Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)
Evacuate unprotected personnel. Product dissipates upon release. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return to the affected area until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)
Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-410A should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

STORAGE RECOMMENDATIONS:

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

INCOMPATIBILITIES:

Freshly abraded aluminum surfaces at specific temperatures and pressures may cause a strong exothermic reaction. Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with the liquid or gas is anticipated, insulated gloves constructed of PVA,



neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH-approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH-approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Difluoromethane	None	None	*1000 ppm TWA (8hr)
Pentafluoroethane	None	None	*1000 ppm TWA (8hr)

* = Workplace Environmental Exposure Level (AIHA)

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV: 2 ppm ceiling, 0.5ppm TLV-TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
MOLECULAR WEIGHT:	72.6
CHEMICAL FORMULA:	CH ₂ F ₂ , CHF ₂ CF ₃
ODOR:	Faint ethereal odor
SPECIFIC GRAVITY (water = 1.0):	1.08 @ 21.1°C (70°F)
SOLUBILITY IN WATER (weight %):	Unknown
pH:	Neutral
BOILING POINT:	-48.5°C (-55.4°F)
FREEZING POINT:	Not determined
VAPOR PRESSURE:	215.3 psia @ 70°F 490.2 psia @ 130°F
VAPOR DENSITY (air = 1.0):	3.0
EVAPORATION RATE:	>1 COMPARED TO: CCl ₄ = 1
% VOLATILES:	100
ODOR THRESHHOLD:	Not established
FLAMMABILITY:	Not applicable
LEL/UEL:	None/None
RELATIVE DENSITY:	1.08 g/cm ³ at 21.1°C
PARTITION COEFF (n-octanol/water)	Not applicable



AUTO IGNITION TEMP: >750°C
DECOMPOSITION TEMPERATURE: >250°C
VISCOSITY: Not applicable
FLASH POINT: Not applicable
(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.

Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

Difluoromethane: LC₅₀ : Inhalation 4 hr. (rat) - $\geq 520,000$ ppm
Pentafluoroethane: Cardiac Sensitization threshold (dog) $\geq 100,000$ ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Teratology – negative
Subchronic inhalation (rat) NOEL – 50,000 ppm

REPEATED DOSE TOXICITY:

Lifetime inhalation exposure of male rats was associated with a small increase in salivary gland fibrosarcomas.

OTHER DATA:

Not active in four genetic studies

FURTHER INFORMATION:

Acute effects of rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation. May cause cardiac arrhythmia.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.



INHALATION: R-410A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None known.

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
No ingredients listed in this section			

12. ECOLOGICAL INFORMATION

Degradability (BOD): R-410A is a gas at room temperature; therefore, it is unlikely to remain in water.
Octanol Water Partition Coefficient: $\log P_{ow} = 1.48$ (pentafluoroethane), 0.21 (difluoromethane)

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not a hazardous waste.
If yes, the RCRA ID number is: Not applicable.

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-410A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT ID NUMBER: UN3163
US DOT PROPER SHIPPING NAME: Liquefied gas, n.o.s., (Pentafluoroethane, Difluoromethane)
US DOT HAZARD CLASS: 2.2
US DOT PACKING GROUP: Not applicable

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Components listed on the TSCA inventory



OTHER TSCA ISSUES: Subject to Section 12(b) export notification. May contain 0-10ppm Ethane, 2-chloro-1,1,1-trifluoro, CAS#75-88-7

SARA TITLE III / CERCLA

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA / CERCLA RQ (lb.)</u>	<u>SARA EHS TPQ (lb.)</u>
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No ingredients listed in this section

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: IMMEDIATE PRESSURE

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 “Toxic Chemicals”. CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
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No ingredients listed in this section

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
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No ingredients listed in this section

ADDITIONAL REGULATORY INFORMATION:

R-410A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: Do not vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains Pentafluoroethane (HFC-125) and Difluoromethane (HFC-32)**, greenhouse gases which may contribute to global warming.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

EU – EINECS # 2065578 – HFC-125

16. OTHER INFORMATION

CURRENT ISSUE DATE: January, 2024

PREVIOUS ISSUE DATE: April, 2018

OTHER INFORMATION: HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI / ASHRAE 34 Safety Group – A1

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101



2. DOT classification per 49 CFR 172.101

Toxicity information per PAFT Testing

DISCLAIMER:

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods or use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Document 00 41 13 - Bid Form (General Contract / Electronic Bid)
State of Ohio Standard Requirements for Public Facility Construction

THIS SAMPLE BID FORM IS PROVIDED WITH THE PROJECT MANUAL AS A PLACEHOLDER ONLY – SUBMIT YOUR BID USING THE ELECTRONIC BID FORM ON [HTTPS://BIDEXPRESS.COM](https://bidexpress.com)

General Info	Alt Total:	Bid Total:
Deadline 05/23/2025 @ 11:00 AM EST Advertised 04/24/2025, 05/01/2025, 05/08/2025 Number SFC-100279.01 Business Name Ohio Facilities Construction Commission Vanguard Sentinel Career & Technology Centers	Description Vanguard Sentinel Career & Technology Centers HVAC Replacement: The Project consists of the replacement of several VRV systems throughout the building with a new chilled water system. Work includes replacement of terminal units (fan coil units), extension of new chilled water piping, and rework of existing heating water piping. Electrical, structural, and temperature control scopes are included to support the infrastructure replacements.	

Procurement Documents
Public Bid Advertisement → Public Bid Advertisement
Solicitation → Notice to Bidders
Project Manual → Procurement & Contracting Requirements and Specifications
Drawings → Plans, elevations, sections, details, and schedules
4 Attachments

Contract Times and Addenda										
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■ Allowance Instructions

Allowance amounts are fixed and no entry of data is required by the Bidder. Include each and every Allowance amount in the Base Bid. The Bidder's Fee (overhead and profit) and costs for unloading and handling on the Site, labor, installation costs, and other expenses contemplated for the Allowance must be included in the Base Bid and NOT in the Allowance amount.

■ Allowances (General Contract)

Item	Description	Allowance Amount*	Extension
Allowance A-1	Temperature Controls Contractor Scope – Base Bid	\$205,000	
Allowance A-2	Temperature Controls Contractor Scope – Alternate #1	\$20,000	
Allowance A-3	Temperature Controls Contractor Scope – Alternate #2	\$40,000	
3 Items		Total:	

■ Base Bid Instructions

Enter the amount of the Base Bid for ALL LABOR AND MATERIALS to complete the scope of Work. Include the amount of each Allowance (if applicable) and the subtotal of each Unit Price Extension (if applicable) in the Base Bid amount. Failure to include Allowance or Unit Price Extensions in the Base Bid is the responsibility of the Bidder and will not be sufficient reason for adjustment of the Bid amount after the Bid deadline. Do not include Alternates (if applicable) in the Base Bid amount.

■ Base Bid (General Contract)

Item	Description	Base Bid Amount*	Extension
Base Bid	All Labor and Materials (include Allowances and Unit Price Extensions above)	_____	
1 Item		Total:	

■ Alternate Instructions

Enter the amount of each and every Alternate to ADD TO or DEDUCT FROM the Base Bid. Indicate amounts to DEDUCT FROM the Base Bid by entering a minus sign (-) before the amount entered. Do not include Alternate amounts in the Base Bid.

■ Alternates (General Contract)

Item	Description	Alternate Amount*	Extension
! Alternate: Owner-agency may award independently from entire bid.			
! Alternates are not included in bid total.			
Alternate #1	Replacement of Area B VRFHP-2 System	_____	
Alternate #2	Replacement of Area B VRFHP-1 System	_____	
2 Items		Alternate Total:	Total:

■ Bidder Affirmation and Disclosure

The Bidder acknowledges that by submitting its Bid, the Bidder has read and understands the applicable Executive Orders regarding the prohibitions of performance of offshore services, locating State data offshore in any way, or purchasing from Russian institutions or companies. If awarded a Contract, the Bidder will become the Contractor and affirms that both the Contractor and its Subcontractors shall perform no services requested under this Contract outside of the United States.

The Bidder shall provide the locations where services under this Contract will be performed in the spaces provided below or by attachment. Failure to provide this information as part of its Bid may cause the Bidder to be deemed non-responsive and no further consideration will be given to its Bid. If the Bidder will not be using Subcontractors, indicate "Not Applicable" in the appropriate spaces.

1. Principal business location of Contractor:

Contractor Address*	City, State, and Zip*
<input type="text"/>	<input type="text"/>

Name / Principal business location of Subcontractor(s), if known at time of Bid deadline:

Subcontractor Name*	Address, City, State, and Zip*
<input type="text"/>	<input type="text"/>

2. Location(s) where services will be performed by Contractor (Project Sites):

Name*	Address, City, State, and Zip*
<input type="text"/>	<input type="text"/>

Name(s) / Location(s) where services will be performed by Subcontractors (Project Sites):

Subcontractor Name	Address, City, State, and Zip
<input type="text"/>	<input type="text"/>

3. Location(s) where State data will be located by Contractor:

Address*	City, State, and Zip*
<input type="text"/>	<input type="text"/>

Location(s) where State data will be located by Subcontractor(s), if known at time of Bid deadline:

Subcontractor Name	Address, City, State, and Zip
<input type="text"/>	<input type="text"/>

Bidder also affirms, understands and agrees that the Contractor and its Subcontractors are under a duty to disclose to the State any change or shift in location of services performed by the Contractor or its Subcontractors before, during and after execution of any Contract with the State. Bidder agrees it shall so notify the State immediately of any such change or shift in location of its services. The State has the right to immediately terminate the contract, unless a duly signed waiver from the State has been attained by the Contractor to perform the services outside the United States.

On behalf of the Bidder, I acknowledge that I am duly authorized to execute this electronic Bid Form including this Bidder Affirmation and Disclosure form and have read and understand that this form is a part of any Contract that Bidder may enter into with the State and is incorporated therein.

EDGE Program Commitment to Participate

Option A

The Bidder commits to meet or exceed the advertised EDGE Participation Goal of the Contract award amount, calculated as a portion of the Base Bid plus all accepted Alternates, by using EDGE-certified Business(es).

The Bidder agrees that if selected for consideration of the Contract, it shall provide (if not provided with the Bidder's Bid) to the Contracting Authority, at the location required and within 3 business days after receiving notice from the Contracting Authority, its fully completed Bidder's Qualification Form, including an EDGE Affidavit form for each EDGE-certified Business proposed for use by the Bidder if awarded the Contract for this Project.

Option B (indicate percentage of participation below)

The Bidder declares that it does not meet the advertised EDGE Participation Goal percentage, but, if awarded the Contract for this Project, commits to provide the percentage of the Contract award amount, indicated above, calculated as a portion of the Base Bid plus all accepted Alternates, by using EDGE-certified Business(es).

The Bidder acknowledges it understands the requirement for it to provide and agrees to provide to the Contracting Authority, if selected for consideration of the Contract, within 3 business days after notice from the Contracting Authority, a detailed Demonstration of Good Faith form describing its efforts undertaken prior to submitting its Bid to meet the advertised EDGE Participation Goal percentage for the Contract for this Project.

The Bidder commits to provide to the Contracting Authority at the location required, and within 3 days after receiving notice from the Contracting Authority, its fully completed Bidder's Qualifications Form, including an EDGE Affidavit form for each EDGE-certified Business proposed for use by the Bidder if awarded the Contract for this Project.

Option C

The Bidder declares that the Bidder is an EDGE-certified Business and that if awarded this Contract, the EDGE Participation percentage will be 100 percent of the Contract award amount.

Select EDGE option above*

Choices...

If option B selected, enter percentage

Input field for percentage

■ Certifications (Non-Prevailing Wage)

1. The Bidder has read and understands the proposed Contract Documents and agrees to comply with all requirements of the proposed Contract Documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder, which might indicate a contrary intention.
2. The Bidder represents that the Bid is based upon the Basis of Design and Acceptable Components specified by the proposed Contract Documents.
3. The Bidder has visited the Site, become familiar with local conditions, and has correlated personal observations about the requirements of the proposed Contract Documents. The Bidder has no outstanding questions regarding the interpretation or clarification of the proposed Contract Documents.
4. The Bidder understands that the execution of the Project will require sequential, coordinated, and interrelated operations, which may involve interference, disruption, hindrance, or delay in the progress of the Bidder's Work. The Bidder agrees that the Contract Sum, as amended from time to time, shall cover all amounts due from the State resulting from interference, disruption, hindrance, or delay that is not caused by the State or its agents and employees. The Bidder agrees that any such interference, disruption, hindrance, or delay is within the contemplation of the Bidder and the State and that the Contractor's sole remedy from the State for any such interference, disruption, hindrance, or delay shall be an extension of time in accordance with the proposed Contract Documents.
5. During the performance of the Contract, the Bidder agrees to comply with Ohio Administrative Code ("OAC") Chapters 123:2-3 through 123:2-9 and agrees to incorporate the monthly reporting provisions of OAC Section 123:2-9-01 into all subcontracts on the Project, regardless of tier. The Bidder understands the State's Equal Opportunity Coordinator or the Contracting Authority may conduct pre-award and post-award compliance reviews to determine if the Bidder maintains nondiscriminatory employment practices, maintains an affirmative action program, and is exerting good faith efforts to accomplish the goals of the affirmative action program. For a full statement of the rules regarding Equal Employment Opportunity in the Construction Industry, see OAC Chapters 123:2-1 through 123:2-9.
6. The Bidder and each Person submitting a Bid on behalf of the Bidder certifies, and in the case of a Bid by a joint venture each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices, and any Alternate bid in the Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the Bid have not been knowingly disclosed by the Bidder and shall not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices, or Alternate bid; (c) no attempt has been made or shall be made by the Bidder to induce any other Person to submit or not to submit a Bid for the purpose of restricting competition.
7. The Bidder shall execute the Agreement with the Contracting Authority, if a Contract is awarded on the basis of this Bid, and if the Bidder does not execute the Agreement for any reason, other than as authorized by law, the Bidder and the Bidder's Surety are liable to the State as provided in Article 5 of the Instructions to Bidders.
8. The Bidder certifies that the upon the award of a Contract, as the Contractor it shall make a good faith effort to ensure that all of the Contractor's employees, while working on the Site, shall not purchase, transfer, use, or possess illegal drugs or alcohol or abuse prescription drugs in any way.
9. The Bidder acknowledges that it read all of the Instructions to Bidders, and in particular, Section 2.10 - Submittals With Bid Form, and by submitting its Bid certifies that it has read the Instructions to Bidders and it understands and agrees to the terms and conditions stated in them.
10. The Bidder agrees to furnish any information requested by the Contracting Authority or the Architect/Engineer to evaluate the responsibility of the Bidder.
11. The Bidder agrees to furnish the submittals required by Section 6.1 of the Instructions to Bidders for execution of the Agreement within 10 days of the date of the Notice of Intent to Award.
12. When the Bidder is a corporation, partnership or sole proprietorship, an officer, partner or principal of the Bidder, as applicable, shall enter the legal name of the Bidder and the name of the officer, partner or principal of the Bidder (in lieu of signing the Bid Form) in the data fields provided.
13. When the Bidder is a joint venture, an officer, partner or principal, as applicable, of each member of the joint venture shall enter the legal name of the applicable member and the name of the officer, partner or principal (in lieu of signing the Bid Form) in the data fields provided.
14. The Bidder represents that the individual that is submitting and digitally signing the electronic Bid is legally authorized to do so.
15. Bidder acknowledges that by the act of submitting an electronic Bid that it is digitally signing the actual Bid, which shall serve as the Bidder's authorization for the further consideration and activity in the bidding and contract process.



The Bidder hereby acknowledges that the above representations in this Bid are material and not mere recitals.*

■ Procurement Forms

Document 00 43 13 - Bid Security Form
→ Upload below and provide original document within 3 days

Document 00 45 13 - Bidder's Qualifications
→ Upload below or provide within 3 days of request

Document 00 45 39 - EDGE Affidavit
→ Upload below or provide within 3 days of request

3 Attachments

■ Instructions for Providing Bid Submittals

Submission of Electronic Facsimile of Bid Guaranty with Electronic Bid

The Bidder SHALL UPLOAD and ATTACH TO ITS BID an ELECTRONIC FACSIMILE (scanned PDF document) OF ITS BID GUARANTY, payable to the Contracting Authority, in the form of either: (1) the signed and sealed Document 00 43 13 - "Bid Security Form" contained in the Contract Documents (and provided for the Bidder's convenience in the block above) for the amount of the Base Bid plus all additive Alternates; or (2) a certified check, cashier's check, or letter of credit, for 10 percent of the Base Bid, plus all additive Alternates – a letter of credit shall expressly provide that it is revocable only by the Contracting Authority. Refer to Sections 2.10.1.1 and 5.1 of Document 00 21 13 - "Instructions to Bidders."

Submission of Original Bid Guaranty

In addition to the Electronic Facsimile above, the Bidder SHALL DELIVER ITS ORIGINAL UNALTERED BID GUARANTY to the Project Coordinator at the address identified below WITHIN 3 BUSINESS DAYS AFTER THE BID DEADLINE as provided in Ohio Administrative Code Section 153:1-8-01(H). THIS REQUIREMENT APPLIES TO ALL BIDDERS. Refer to Section 2.10.1.2 of the Instructions to Bidders.

Liesl Ries
Project Coordinator
Ohio Facilities Construction Commission
30 West Spring Street, 4th Floor
Columbus, OH 43215

Non-responsive Bid for Failure to Submit Bid Guaranty

Each Bidder MUST SUBMIT BOTH THE ELECTRONIC FACSIMILE AND THE ORIGINAL UNALTERED BID GUARANTY as described above. The Contracting Authority SHALL REJECT A BID AS NON-RESPONSIVE if the Bidder fails to submit BOTH elements of the Bid Guaranty. The checkboxes below are to identify that you have uploaded the other form of Bid Guaranty. DO NOT CHECK ALL BOXES. Refer to Section 2.10.1 of the Instructions to Bidders.

Submission of Bidder's Qualifications and EDGE Affidavit

The Bidder is encouraged to submit background information with its Bid using Document 00 45 13 - "Bidder's Qualifications" and Document 00 45 39 - "EDGE Affidavit" with the EDGE-certified Business(es) the Bidder proposes to use on the Project (forms provided for the Bidder's convenience in the block above). If the Bidder does not submit the Bidder's Qualifications form and/or the EDGE Affidavit form and related information attached to the electronic Bid Form, the Bidder shall provide it within 3 days of request. Refer to Sections 2.10.3 and 3.5.4 of the Instructions to Bidders.

Required Bid Guaranty Upload	
Name	File*
Document 00 43 13 - Bid Security Form → Upload a scan of the fully executed Bid Security Form AND submit the original document to the Contracting Authority within 3 days of the bid deadline	Select file... no file selected <input type="checkbox"/> I am NOT enclosing this document because the omission terms have been met. (Bidder submitted a Cashier's check below)
Power of Attorney → Upload a scan of the fully executed Power of Attorney AND submit the original document to the Contracting Authority within 3 days of the bid deadline	Select file... no file selected <input type="checkbox"/> I am NOT enclosing this document because the omission terms have been met. (Bidder submitted a Cashier's check below OR included with the Bid Security Form above)
Cashier's Check for 10% of the Bid → Upload a scan of the Cashier's Check AND submit the original check to the Contracting Authority within 3 days of the bid deadline	Select file... no file selected <input type="checkbox"/> I am NOT enclosing this document because the omission terms have been met. (Bidder submitted the Bid Security Form AND Power of Attorney above)
3 Required Documents	

Bidder's Qualifications and EDGE Affidavit Upload	
Name	File*
Document 00 45 13 - Bidder's Qualifications → Upload fully completed form and attachments	Select file... no file selected <input type="checkbox"/> I am NOT enclosing this document because the omission terms have been met. (Must be submitted to the Contracting Authority within 3 days of request)
Document 00 45 39 - EDGE Affidavit → Upload a completed form for each EDGE business	Select file... no file selected <input type="checkbox"/> I am NOT enclosing this document because the omission terms have been met. (Must be submitted to the Contracting Authority within 3 days of request)
2 Required Documents	

■ Bidder Signatory Information

Bidder Signatory

Name of Bidder's Authorized Signatory:*

Title of Authorized Signatory:*

All Bidders complete all information in this form. Duplicate and complete the block below for each Joint Venturer:

Bidder Information

Business Name:*

Business Mailing Address, City, State, Zip:*

Telephone Number:*

Facsimile Number:

Email Address:*

Federal Tax ID Number:*

State of Incorporation (if applicable):

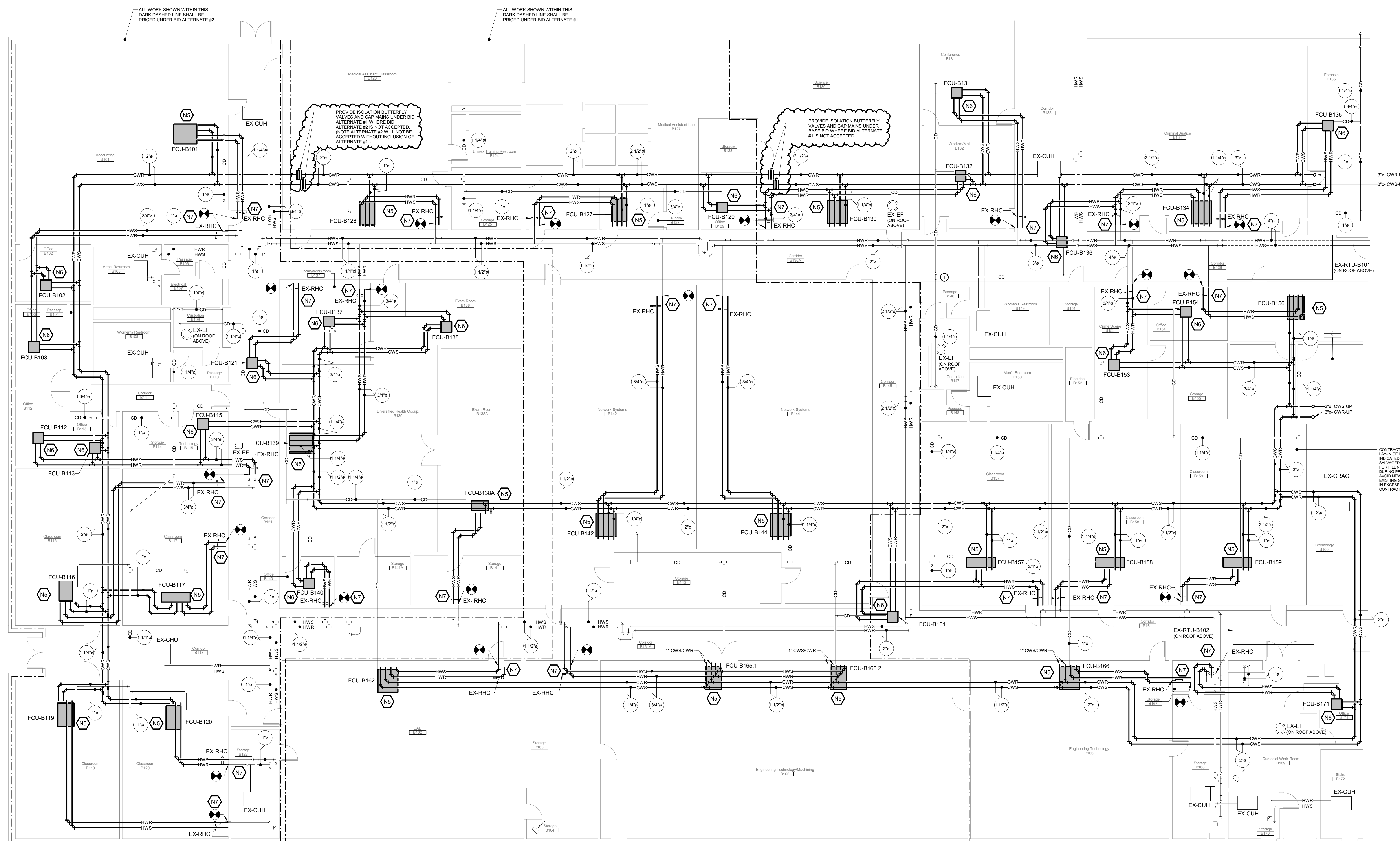
Contact person for Contract processing:*

Date enrolled in an OBWC-approved DFSP (month/date/year):

President or Chief Executive Officer's Name:*

President or Chief Executive Officer's Title:*

END OF DOCUMENT



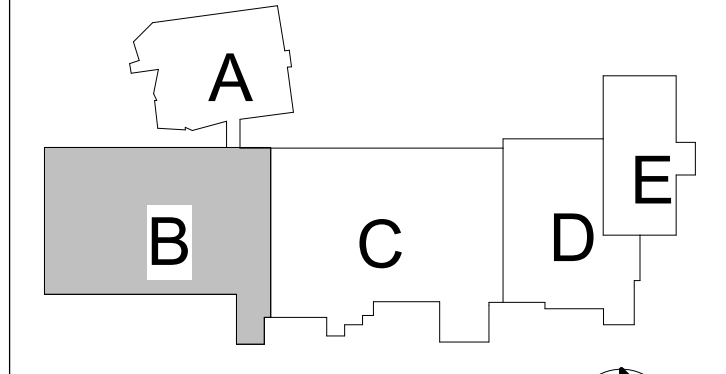
PROVIDE ISOLATION BUTTERFLY VALVES AND CAP MANS UNDER BID ALTERNATE #1 WHERE BID ALTERNATE #2 IS NOT ACCEPTED. (NOTE ALTERNATE #2 WILL NOT BE ACCEPTED WITHOUT INCLUSION OF ALTERNATE #1.)

PROVIDE ISOLATION BUTTERFLY VALVES AND CAP MANS UNDER BASE BID WHERE BID ALTERNATE #1 IS NOT ACCEPTED.

CONTRACTOR SHALL PROVIDE ALL NEW LAY-ON CEILING TILES WITH ROOM INDICATED. EXISTING TILES SHALL BE SALVAGED OR REUSED BY CONTRACTOR FOR FILLING REPAIRS TO TILES DAMAGED DURING PROJECT. THE RENT BEING TO AVOID NEW TILES CHECKED WITHIN EXISTING GRIDS. REPLACEMENT OF TILES IN EXCESS OF THE ROOM SHALL BE AT CONTRACTOR'S EXPENSE.



KEY PLAN

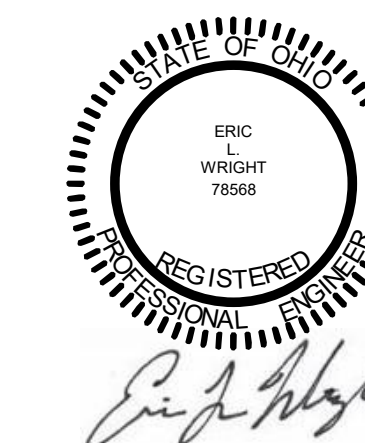


No.	Description	Date
1	ISSUED FOR BID	04/24/2025
2	ADDENDUM #1	05/07/2025
3	ADDENDUM #2	05/13/2025
4	ADDENDUM #3	05/14/2025

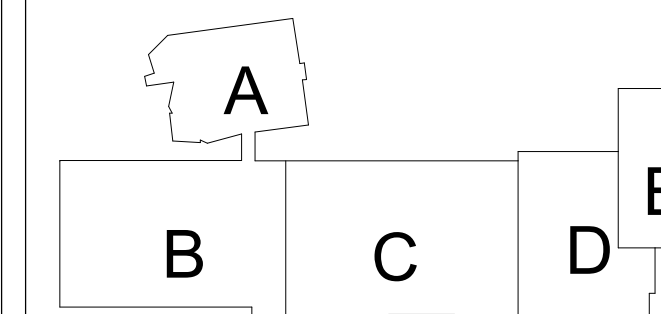
KEYNOTES

N5	INSTALL NEW DUCTED FCU. INSTALL ASSOCIATED CHILLED WATER AND HEATING WATER PIPING AS SHOWN. EXTEND DRAIN TO ASSOCIATED CONDENSATE PUMP INLET. RECONNECT CONDENSATE PUMP DISCHARGE TO EXISTING CONDENSATE DRAIN PIPING.
N6	INSTALL NEW CEILING CASSETTE FCU. INSTALL ASSOCIATED CHILLED WATER AND HEATING WATER PIPING AS SHOWN. EXTEND DRAIN TO ASSOCIATED CONDENSATE PUMP INLET. RECONNECT CONDENSATE PUMP DISCHARGE TO EXISTING CONDENSATE DRAIN PIPING.
N7	TIE INTO EXISTING HEATER WATER PIPING AND EXTEND TO NEW FCU(S) AS SHOWN.

KEYNOTES	
N9	PROVIDE PIPE SUPPORT WITH LENGTH AS INDICATED. LOCATE PIPE SUPPORT APPROXIMATELY AS SHOWN.
N10	PROVIDE PIPE SUPPORT WITH LENGTH AS INDICATED. CENTER PIPE SUPPORT ON STRUCTURAL BEAM / JOIST BELOW.



KEY PLAN



No.	Description	Date
1	ISSUED FOR BID	04/24/2025
4	ADDENDUM #3	05/14/2025



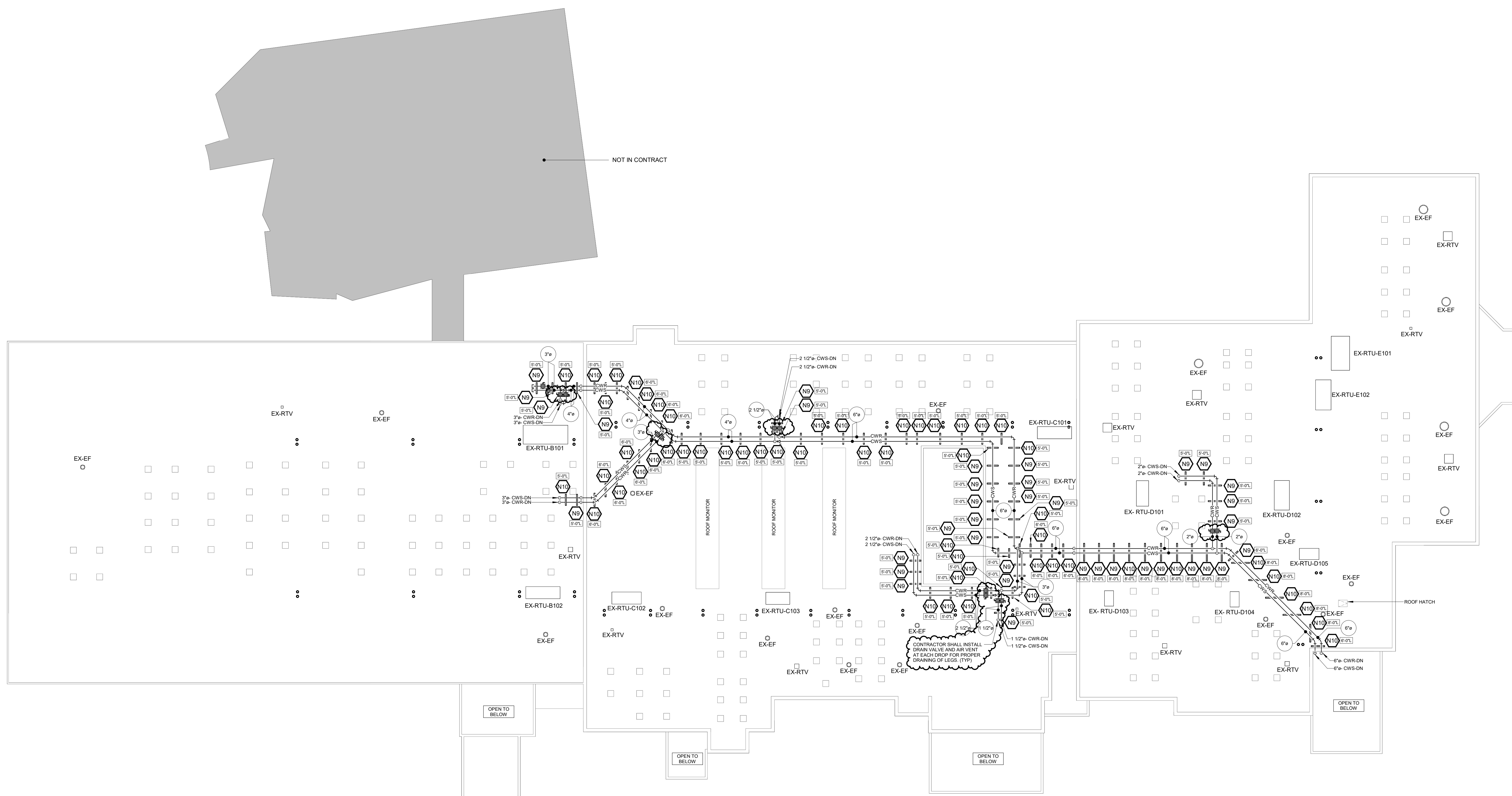
HVAC REPLACEMENT

HVAC PIPING PLAN - ROOF

Project number	SFC-100279.01
Date	04/24/2025
Drawn by	DRW
Checked by	ELW

M4.R

5/14/2025 12:42:38 PM

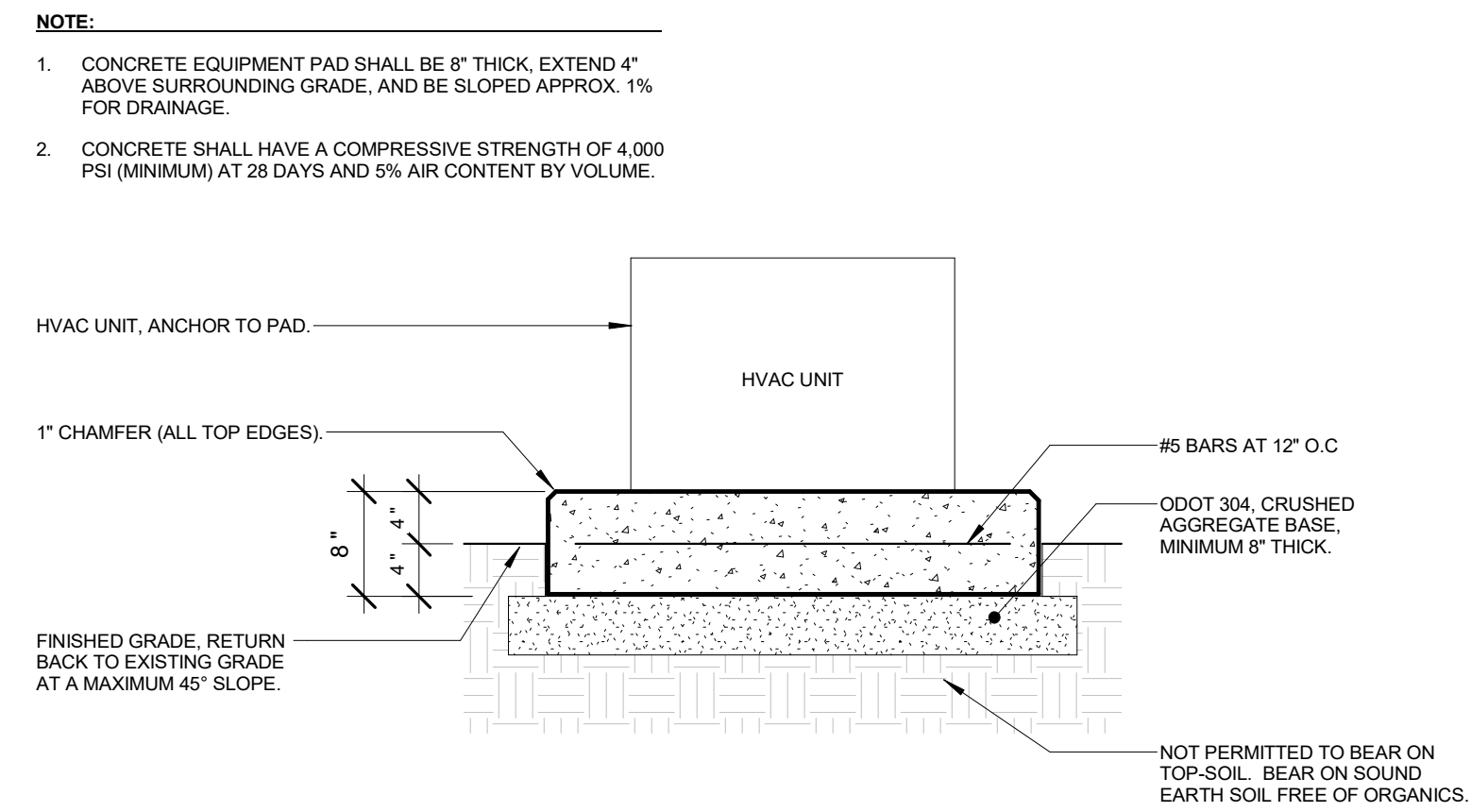


1 HVAC PIPING PLAN - ROOF
M4.R 1" = 20'-0"

AIR COOLED CHILLER SCHEDULE

NOTES:
 1. FURNISH WITH 5 YEAR COMPRESSOR PARTS WARRANTY.
 2. FURNISH WITH BACNET COMMUNICATION, RUBBER-IN-SHEAR VIBRATION ISOLATORS, COMPRESSOR REFRIGERANT ISOLATION VALVES, ELECTRONIC EXPANSION VALVE, CONDENSER LOUVERS WITH ALUMINUM WIRE SCREENS, AND VFD'S ON CONDENSER FANS.
 3. FURNISH WITH SKID MOUNTED CHILLED WATER DUAL PUMPS WITH VFD'S, STRAINER AND ISOLATION VALVES.

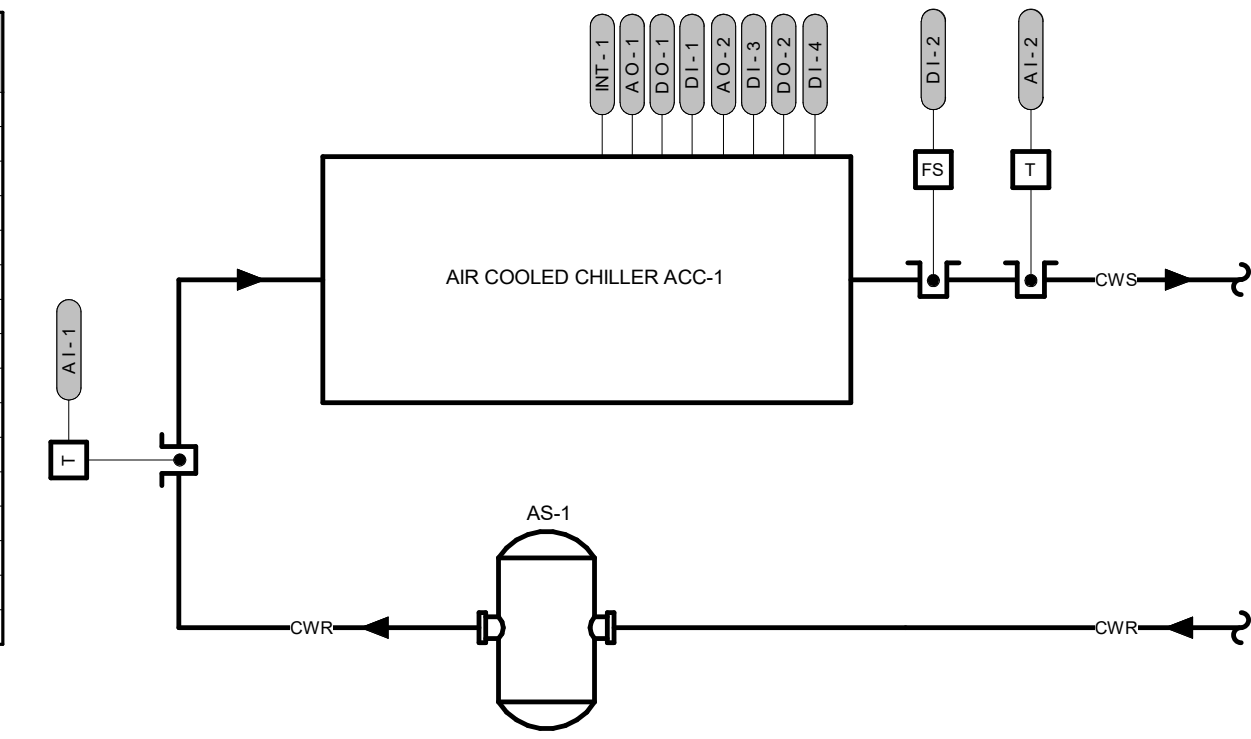
MARK	PRICED UNDER	MANUFACTURER	MODEL	TYPE	OUTPUT CAPACITY (TONS)	EFFICIENCY			EVAPORATOR					REFRIGERATION / CONDENSER			CHILLED WATER PUMPS				ELECTRICAL			OPERATING WEIGHT (LBS)	REMARKS				
						EER	IPLV	REFRIGERANT TYPE	FLUID	MIN FLOW (GPM)	DESIGN FLOW (GPM)	EWT (F)	LWT (F)	MAX WPD (FT)	COMPRESSOR QTY	CIRCUIT QTY	COMPRESSOR TYPE	DESIGN AMBIENT HIGH TEMP (F)	DESIGN AMBIENT LOW TEMP (F)	QTY	GPM	HEAD (FT)	MHP			VOLTS/PHASE	MCA	MOCP	DISCONNECT BY
ACC-1	BASE BID	DAIKIN	AG2010F	AIR COOLED SCROLL	153.0	8.347	17.48	R-32	30% PG	224.6	389.0	52	42	15	6	2	SCROLL	105	0	2	389.0	169.7	25	460/3	454	500	MFR	9,428	1, 2, 3



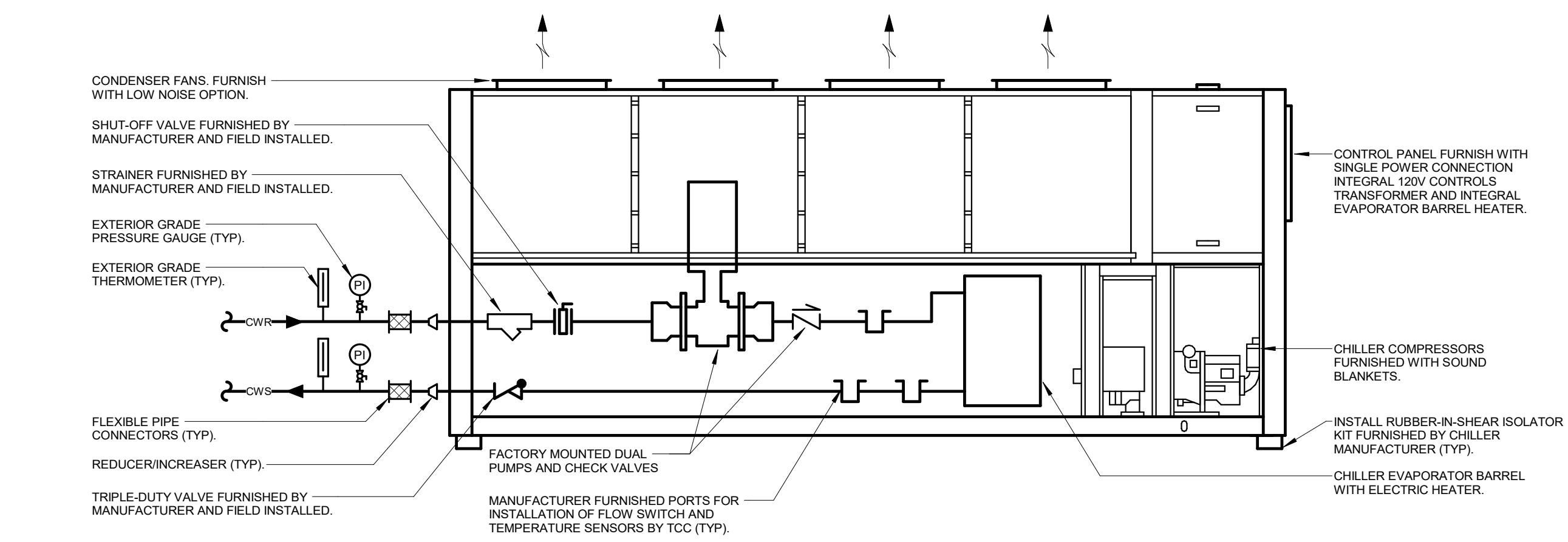
9 GROUND MOUNT HVAC UNIT INSTALLATION DETAIL
 M5.1 NTS

CHILLED WATER SYSTEM CONTROL POINT LIST

POINT	DESCRIPTION
AO-1	CHILLER SETPOINT TEMPERATURE
AO-2	CWP VFD SPEED MODULATION
AI-1	CHILLED WATER RETURN TEMPERATURE
AI-2	CHILLED WATER SUPPLY TEMPERATURE
DO-1	CHILLER START/STOP
DO-2	CWP VFD START/STOP
DI-1	CHILLER ALARM
DI-2	CHILLED WATER FLOW
DI-3	CWP VFD ALARM
DI-4	CWP STATUS
INT-1	CHILLER BACNET



2 CHILLED WATER SYSTEM CONTROLS DIAGRAM
 M5.1 NTS



1 AIR COOLED CHILLER PIPING DETAIL
 M5.1 NTS

EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	TYPE	TANK VOLUME (GAL.)	CHARGE PRESSURE (PSIG)
ET-1	TACO	CA300-125	CHILLED WATER	BLADDER FULL ACCEPTANCE	79	18

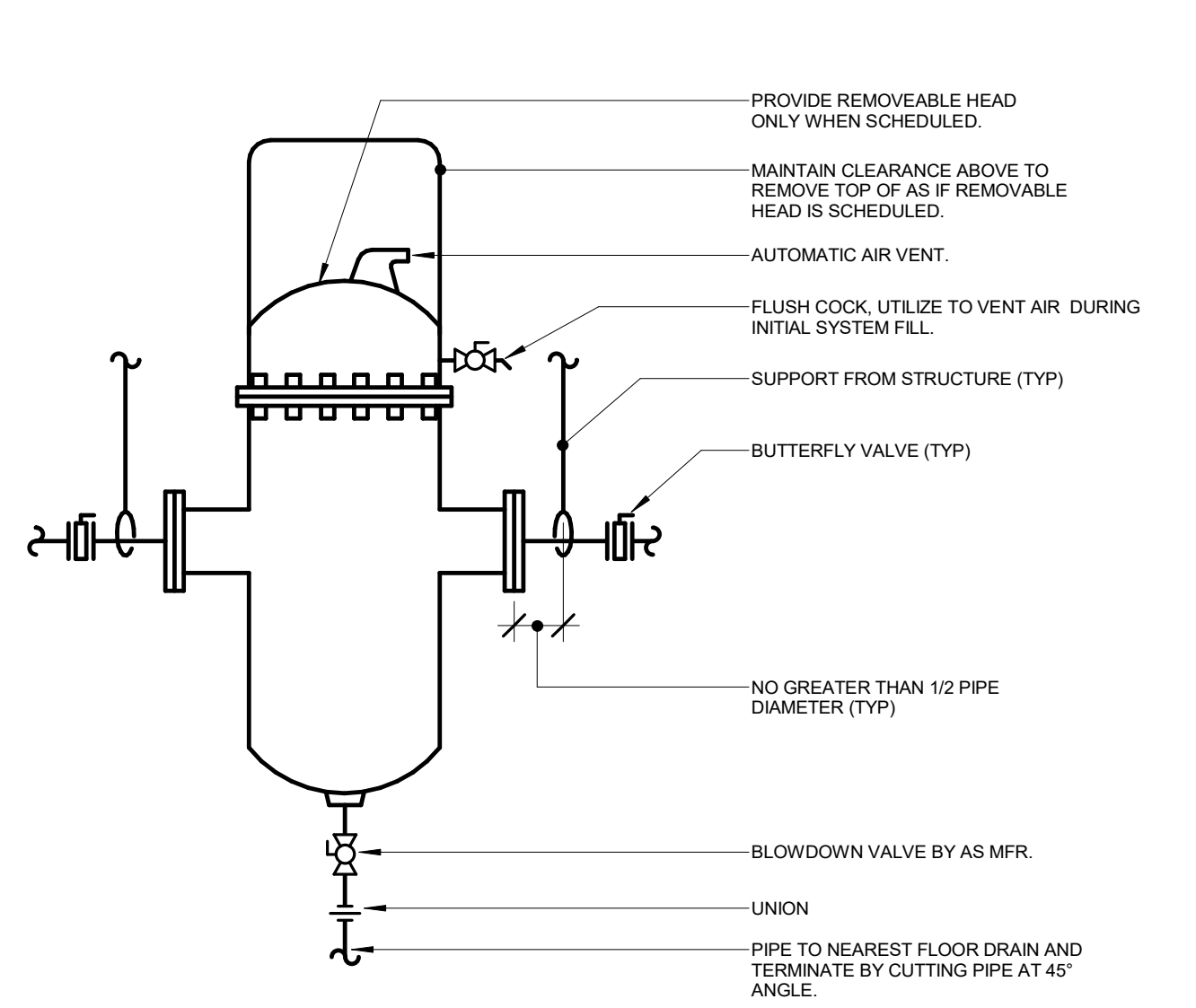
AIR & DIRT SEPARATOR SCHEDULE

MARK	PRICED UNDER	MANUFACTURER	MODEL	TYPE	SERVICE	SIZE (IN)	GPM RANGE	MAX PRESSURE DROP (FT)
AS-1	BASE BID	TACO	4906AD-125	COALESCING	CHILLED WATER	6"	251-700	2

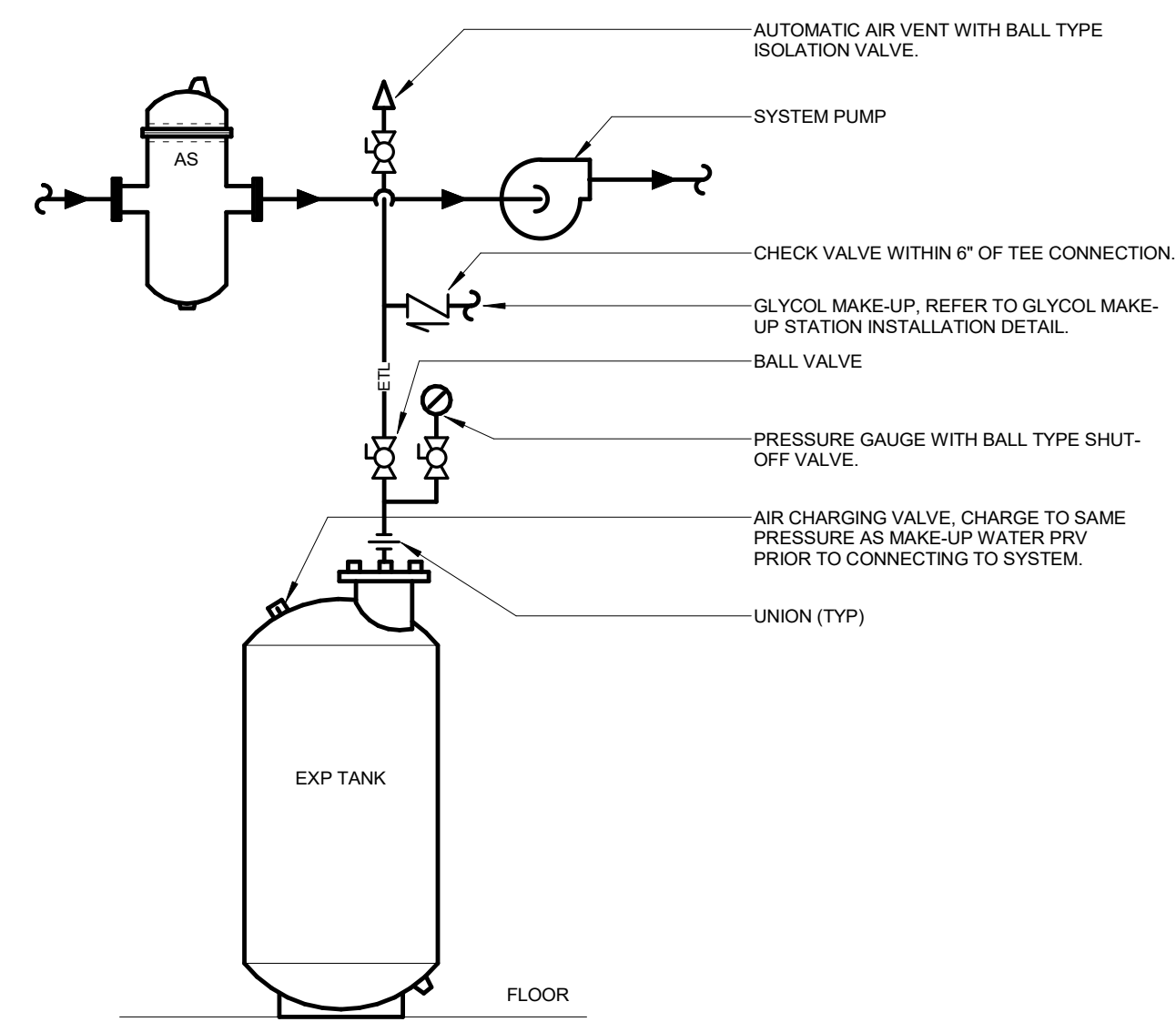
GLYCOL MAKE-UP STATION SCHEDULE

REMARKS:
 1. FURNISH WITH TANK LOW LEVEL ALARM.

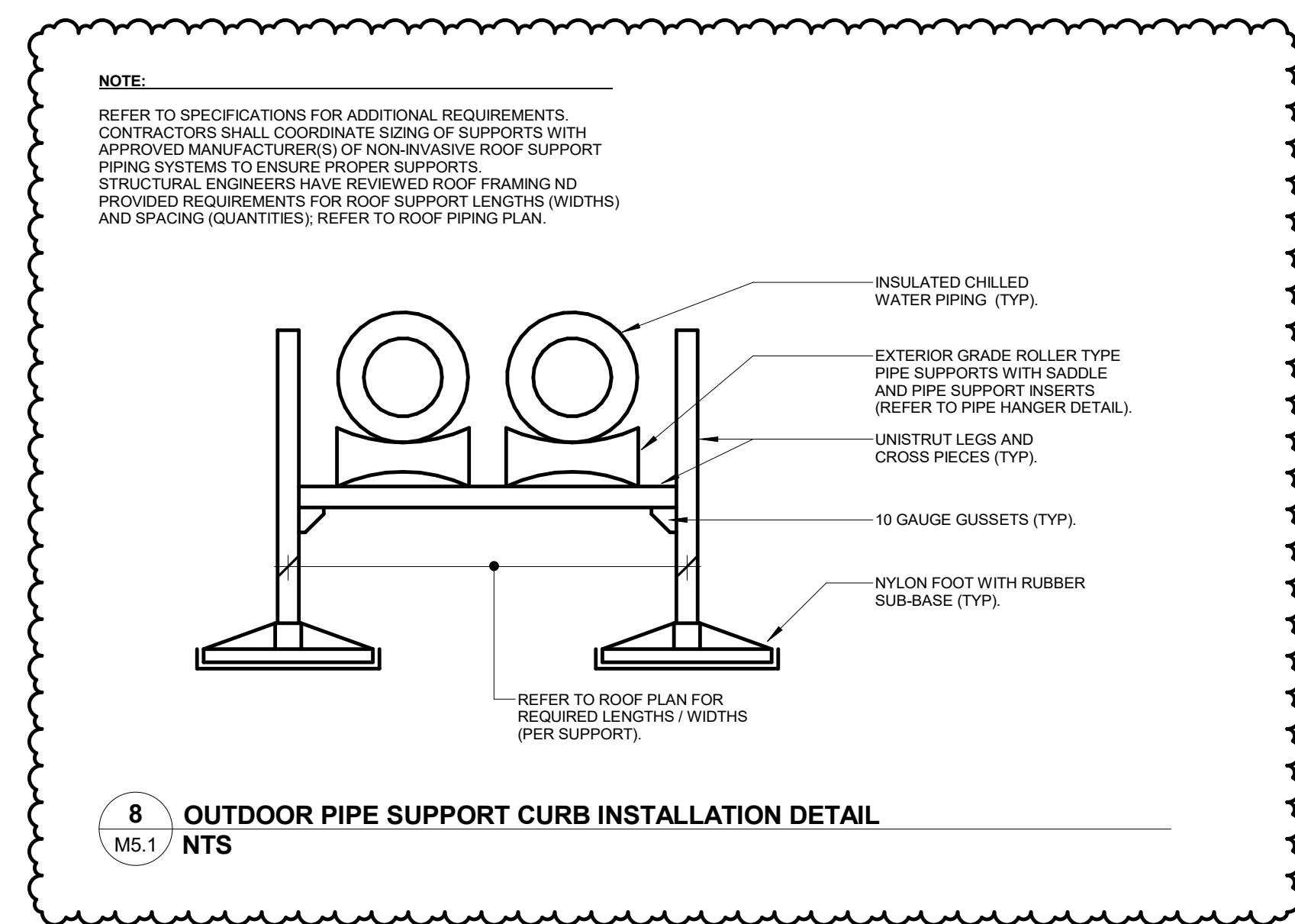
MARK	PRICED UNDER	MANUFACTURER	MODEL	SERVICE	TANK		PUMP			ELECTRICAL			REMARKS		
					VOLUME (GAL)	FLUID	HP	GPM	MAX DISCHARGE PRESSURE (PSI)	CUT-IN PRESSURE (PSI)	CUT-OUT PRESSURE (PSI)	VOLTS/PH		FLA	DISCONNECT BY
GMS-1	BASE BID	SKIDMORE	S-55-100-2-PEFS	CHILLED WTER SYSTEM	55	30% PG	0.33	2	45	25	35	120/1		MFR, PLUG IN	1



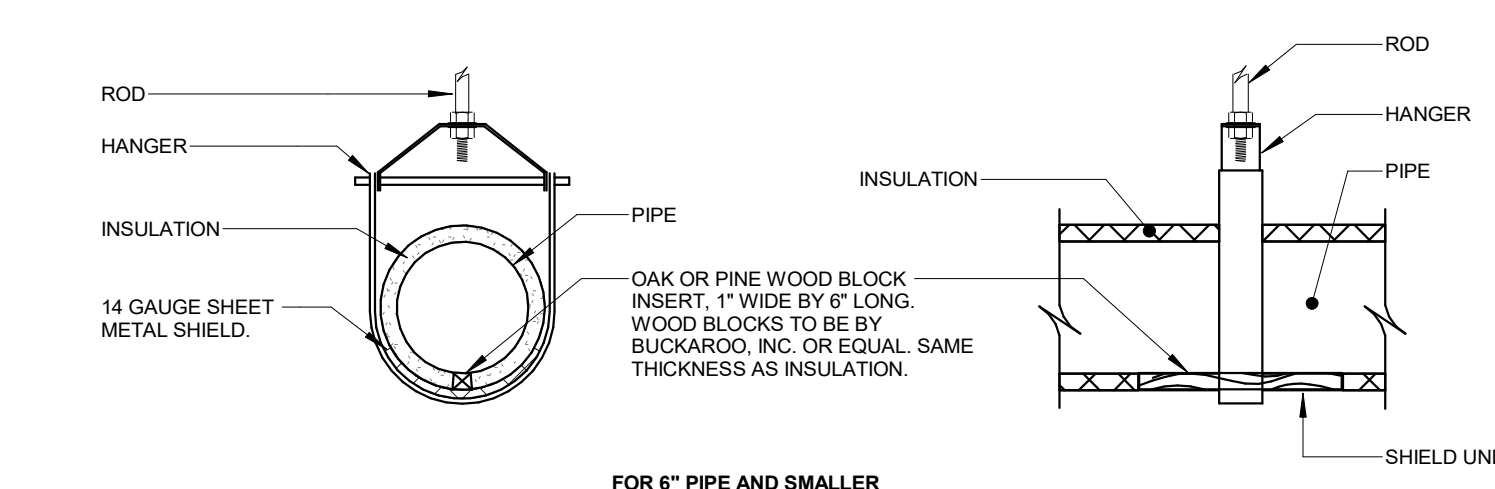
3 AIR SEPARATOR INSTALLATION DETAIL
 M5.1 NTS



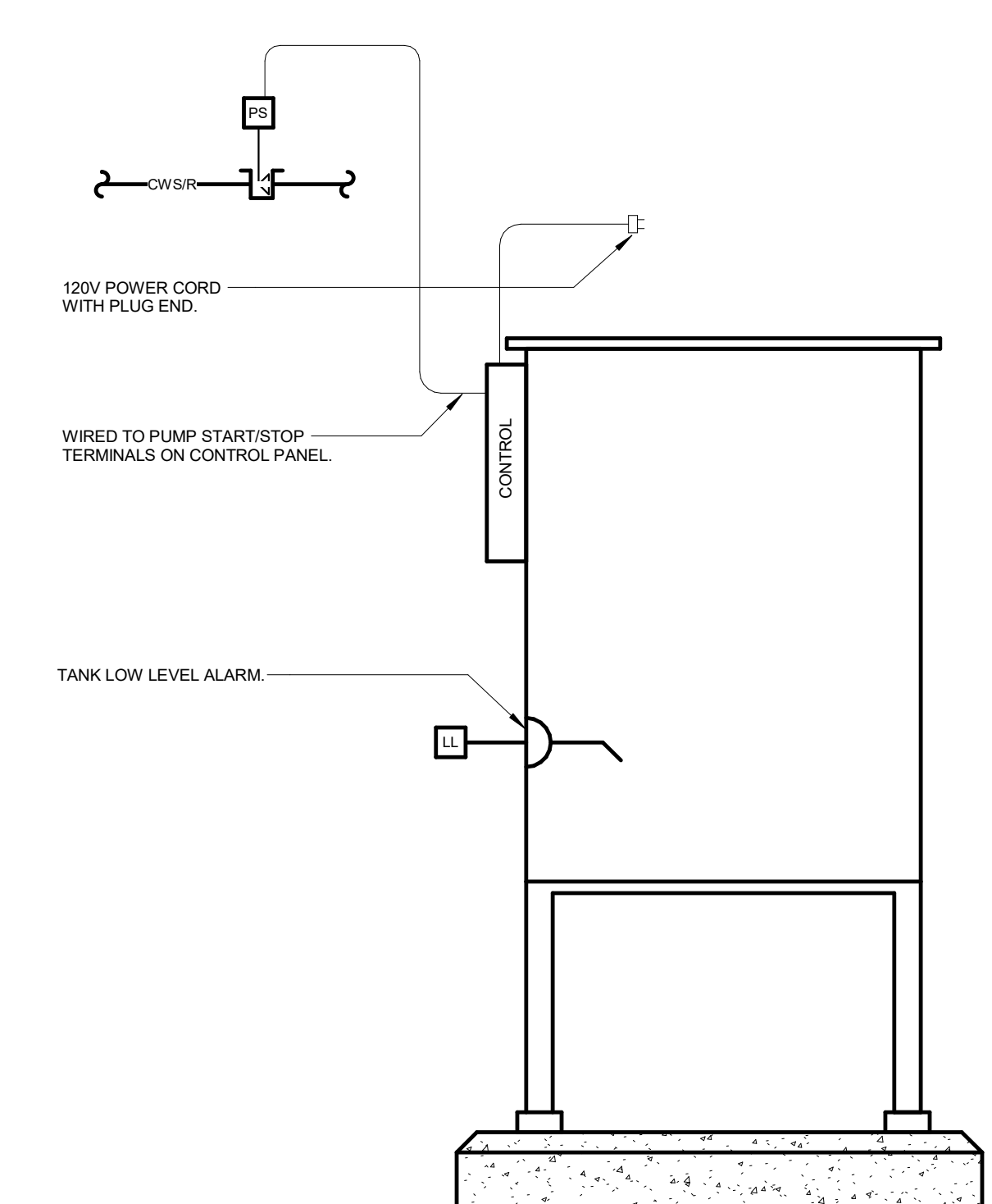
4 EXPANSION TANK INSTALLATION DETAIL
 M5.1 NTS



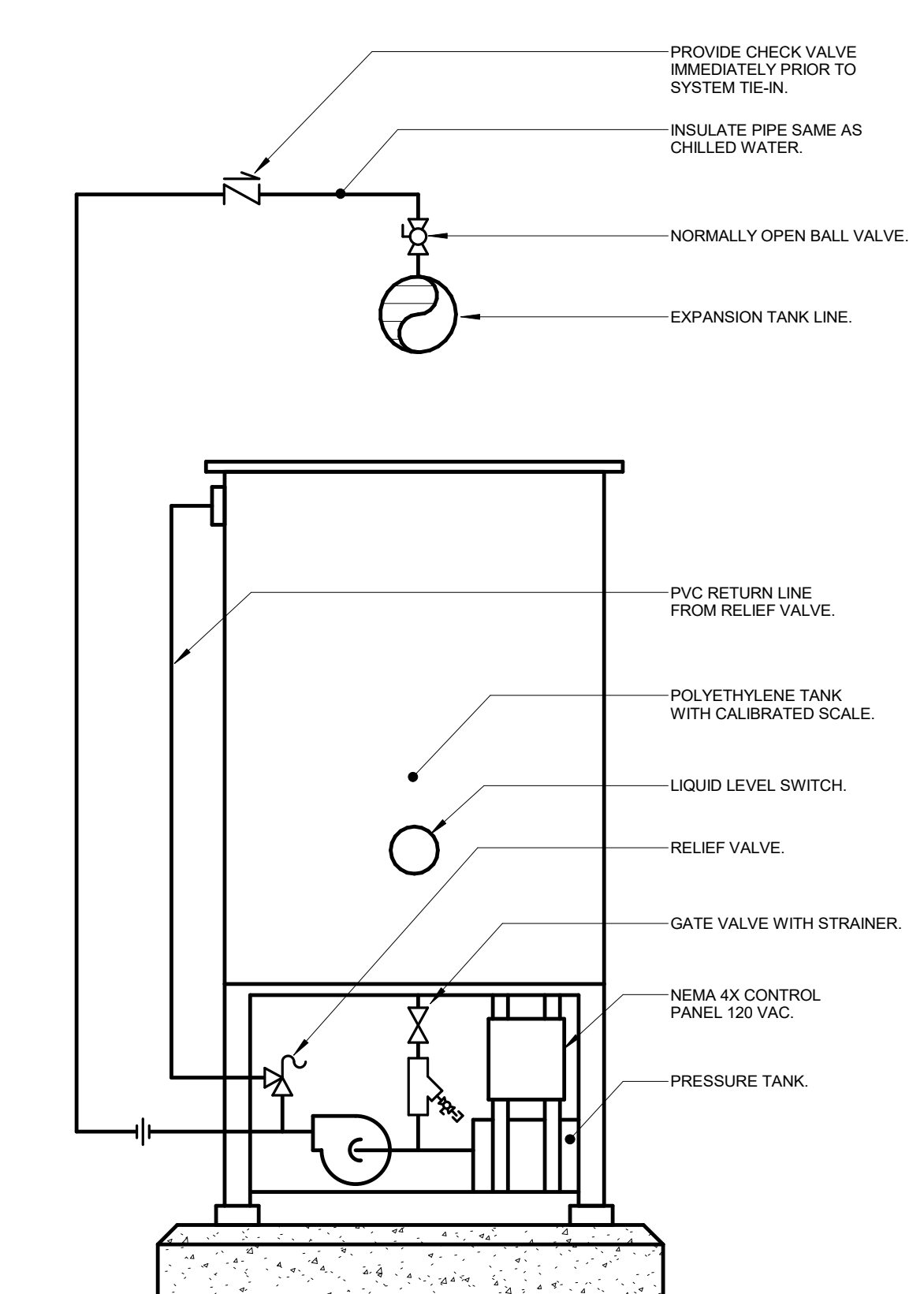
8 OUTDOOR PIPE SUPPORT CURB INSTALLATION DETAIL
 M5.1 NTS



5 PIPE HANGER DETAIL - HYDRONIC
 M5.1 NTS



7 GLYCOL MAKE-UP STATION CONTROL DETAIL
 M5.1 NTS



6 GLYCOL MAKE-UP STATION INSTALLATION DETAIL
 M5.1 NTS



No.	Description	Date
1	ISSUED FOR BID	04/24/2025
4	ADDENDUM #3	05/14/2025



HVAC REPLACEMENT

MECHANICAL SCHEDULES AND DETAILS

Project number	SFC-100279.01
Date	04/24/2025
Drawn by	DRW
Checked by	ELW

M5.1