

ADVERTISEMENT FOR BIDS
JOHNSON COUNTY COMMISSION
JOHNSON COUNTY, MISSOURI
JOHNSON CO. DETENTION CENTER WWTP UV ADDITION

Johnson County Commission (Owner) is requesting Bids for the construction of the following Project:

Johnson Co. Detention Center WWTP UV Addition
McClure PN 2023001670-010

Bids for the construction of the Project will be received at the **Johnson County Commission** office located at **300 N. Holden, Ste. 201, Warrensburg, MO 64093** until **Tuesday, October 22, 2024** at **1:00 p.m.** local time. At that time the Bids received will be **publicly** opened and read at 1:30 p.m.

The Project includes the following Work:

- 1. Installation of a UV system for disinfection or treated wastewater.**
- 2. All other work shown on the Drawings and called for in the Specifications.**

Copies of plans and specifications can be seen or purchased for a Non-Refundable fee on-line at www.drexeltech.com in their eDistribution plan room, additional assistance is available at distribution@drexeltech.com. Information regarding this project can be found in the "Public Jobs" link on the website. Contractors desiring the Contract Documents for use in preparing bids may also obtain a set of such documents from Drexel Technologies; 10840 West 86th Street, Lenexa, KS 66214, telephone number is 913-371-4430. Bidding documents will be shipped only if the requesting party assumes responsibility for all related charges. Corporate, certified, or cashier's checks shall be made payable to Drexel Technologies, Inc.

Questions on the Bid Documents from general contractors and sub-contractors will be answered by the Macon, MO office of the Consulting Engineer. All questions must be submitted using the Request for Information Form (RFI) included in the specifications to Susan Copenhaver of the consulting engineer via e-mail at scopenhaver@mecresults.com. Any explanation or interpretation made will be in the form of a written response on the RFI form or by Addendum issued by the Consulting Engineer and furnished to all Bidders identified as plan holders of record. No requests for alternate or "equivalent" products will be considered prior to Bid Opening.

A pre-bid conference for the Project will be held on **Wednesday, October 9, 2024, at 10:00 a.m.** at **Johnson County Sheriff's Shooting Range located just north of 278 SW 87st Road, Center, MO 63436.** Attendance at the pre-bid conference is encouraged but not required.

Note: Construction completion time will be 60 days after the date of the Notice to Proceed.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

This Advertisement is issued by:

Owner: **Johnson County Commission**

By: **Jennifer Powers**

Title: **County Clerk Chief Deputy**

Date: **September 23, 2024**

ADDENDUM NO. 1
TO
PLANS AND SPECIFICATIONS
FOR THE

JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION
JOHNSON COUNTY COMMISSION
JOHNSON COUNTY, MISSOURI

MEC PROJECT NO. 2023001670

TO ALL PLAN HOLDERS:

This Addendum No. 1 shall be attached to and become part of the Contract Documents for the "JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION, JOHNSON COUNTY, MISSOURI" project. The Specifications and Plans shall be changed and added to as follows:

PRE-BID MEETING LOCATION

Clarification: The Pre-Bid Meeting location address is 278 SW 871st Road, Centerview, MO 64019.

If you have any questions, please contact Coby Crowl at 816-502-3909.

Very truly yours,

McCLURE ENGINEERING COMPANY

Coby Crowl, P.E.
Team Leader



**ADDENDUM NO. 2
TO
PLANS AND SPECIFICATIONS
FOR THE**

**JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION
JOHNSON COUNTY COMMISSION
JOHNSON COUNTY, MISSOURI**

MEC PROJECT NO. 2023001670

TO ALL PLAN HOLDERS:

This Addendum No. 2 shall be attached to and become part of the Contract Documents for the "JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION, JOHNSON COUNTY, MISSOURI" project. The Specifications and Plans shall be changed and added to as follows:

BID DATE

Bid submission deadline is changed to October 29, 2024, at 1:00 p.m. Bids will be opened and read aloud October 29, 2024, at 1:30 p.m.

ENGINEER'S CERTIFICATION PAGE

Replace Engineer's Sealed Certification Page in the Specifications with one attached as signed and dated.

PRE-BID MEETING MINUTES

Attached are the Pre-Bid Meeting Minutes and Sign-In-Sheet from the October 9, 2024, Meeting. Items discussed followed the agenda. Clarifications and answers to questions discussed in the meeting are shown in RED text.

AGREEMENT

Clarification: Liquidated Damages will be \$500 per calendar day.

If you have any questions, please contact Coby Crowl at 816-502-3909.

Sincerely,
McCLURE ENGINEERING COMPANY

Coby Crowl, P.E.
Team Leader



SPECIFICATIONS
FOR

JOHNSON CO. DETENTION CENTER WWTP UV ADDITION
JOHNSON COUNTY COMMISSION, JOHNSON COUNTY, MISSOURI

MEC PROJECT NO. 2023001670-010



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Missouri.

Coby Crowl, P.E. No. E2000150006 (Date)

My license renewal date is December 31, 2025

Pages covered by this Seal: "All"

PREBID MEETING MINUTES

JOHNSON CO. DETENTION CENTER WWTP UV ADDITION
JOHNSON COUNTY COMMISSION
JOHNSON COUNTY, MISSOURI
PROJECT NO. 2023001670-010

WEDNESDAY, OCTOBER 9, 10:00 A.M.
JOHNSON COUNTY SHERIFF'S SHOOTING RANGE

Items in RED text are clarifications discussed during the pre-bid meeting. Sign In Sheet is attached.

I. INTRODUCTION

- A. Owner: Johnson County Commission
 - Commissioners: Troy Matthews, Presiding Commissioner; John Marr, Eastern District; Charles Kavanaugh, Western District
 - County Clerk, Chief Deputy: Jennfier Powers
 - Tracy Branter, Executive Director, Johnson County EDC
 - Tony Lerda, Chief Operator O&M Enterprises
- B. Engineer: McClure
 - Coby Cowl, P.E., Project Manager
- C. Purpose of this meeting is to discuss project, specifications, and contract documents, and receive questions relative to the project. Site Tour followed the meeting.

II. GENERAL INFORMATION

- A. Receive and Open Bids:

Bid Documents to be received at 1:00 P.M. on Tuesday, October 22 **29**, 2024.

Bids will be opened and read aloud in the Commission Chambers at 1:30 PM, Tuesday, October 24 **29**, 2024.

Received: Johnson County Commission
 300 N. Holden. Ste. 201
 Warrensburg, MO 64093
- B. Description of Project:
 - 1. Installation of a UV system for disinfection of treated wastewater.
 - 2. All other work shown on the Drawings and called for in the Specifications.
- C. Bid Bond
 - 1. Each bid shall be accompanied by a Bid Bond, certified check, cashier's check or a Certified Share Draft in a separate sealed envelope in an amount equal to five percent (5%) of the total amount.
- D. Payment for Construction

1. Contractor shall submit Applications for Payment in accordance with Article 6 – Payment Procedures of the Agreement.
- E. Performance and Payment Bond
1. The successful Bidder will be required to furnish a corporate surety bond in an amount equal to one hundred (100) percent of the Contract Price. Said Bond to be issued by a responsible surety approved by the Owner and authorized to do business in the State of Missouri and shall guarantee the faithful performance of the contract and the terms and conditions therein contained and the maintenance of said improvements in good repair for not less than two (2) years from the time of Substantial Completion. Successful bidder shall also be required to provide Payment Bond as provided in the Specifications.
- F. Wage Determination – Davis Bacon
1. We anticipate this project to be less than \$75,000. If you determine the cost will be more than \$75,000, minimum wage rates will apply for this contract shall be prevailing wage rates as determined by the Missouri Department of Labor and Industrial Relations and the Davis Bacon Act, as issued by the US Department of Labor for Johnson County, Missouri. **Contractor to obtain the latest prevailing wage rates from the Missouri Department of Labor, if needed for Johnson County, Missouri. Heavy Rates are to be used.**
- G. Engineering Services during Construction
1. Construction Administration – McClure.
 2. Periodic Resident Project Representative Services – McClure.
 3. Construction Staking – Contractor.
- H. Project Meetings - Section 01 30 00 – “Administrative Requirements”.
1. Preconstruction Meeting. Engineer will schedule and lead the meeting, virtually. Engineer will prepare minutes.
 2. Project Progress Meetings. Contractor will lead meetings, develop/distribute agendas, schedules and corresponding meeting minutes. **Progress meetings are not anticipated for this project.**
- I. Award of Contract
1. The Owner will receive and consider bids on the Project and will award a single Contract. The award of the Contract will be made to the lowest responsive, responsible bidder, based on the Bid Proposal Form with the lowest Lump Sum Price. Notwithstanding the foregoing, the owner reserves the right to award the contract as it deems to be in the best interests of the County.
- J. Proposal Form
1. Required Bid Security;
 2. List of Proposed Subcontractors;
 3. List of Proposed Suppliers;
 4. List of Project References;
 5. Evidence of authority in good standing to do business in the state of Missouri; or a written covenant to obtain such license within the time for acceptance of Bids;

6. Contractor's License No.: [REDACTED] [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
7. Required Bidder Qualification Statement with supporting data; and

Name of bidder on proposal form must match company name as registered with the State of Missouri. Attach evidence of authority to sign for corporations, LLC, partnerships, JV's, etc.

K. Completion Dates:

1. The Work shall be substantially completed within 60 days after the date when the Contract Times commence to run. This is noted in Article 9 of the Instructions to Bidders. **Engineer may delay the Notice to Proceed dated based on anticipated delivery of equipment.**

L. Liquidated Damages

1. Failure to meet the substantial completion date or the final completion date will result in liquidated damages of \$500.00 per calendar day. This will be added to the contract by addendum.

M. Permits:

1. Do all work within easements, rights-of-way, and property furnished by the Owner.
2. Construction permits are obtained by the Owner from the Missouri Department of Natural Resources.

N. Addenda Issued by October 14, 2024.

O. Engineer Notes/Comments

1. Some updates will be made to the plans to clarify electrical and mechanical expectations.
2. The contractor can provide a pre-cast vault with top to be flush with the ground. Note this on the bid form. Existing vault is a pre-cast storm shelter available from manufacturer in Lincoln, Missouri. **Stewart Concrete Products. 660-547-2597.**

P. Request for Information (RFI) Questions and Answers

Q. Open the floor to questions.

R. Site Tour following meeting (optional).

Notes:

1. **How much time is allotted for by-pass? – 30-minutes to an hour at this plant without pumping. A by-pass manhole will be added to the project by addendum.**
2. **Power concerns for the new UV system? – Yes. New drawings for the electrical supply and equipment rack will be provided by addendum.**
3. **Is there a concern with power supply from the generator? – Supply from the generator will be confirmed.**
4. **Is repair to gravel and fencing required. Yes, apply new gravel is disturbed area within the fence; seed areas outside the fence; and replace/repair fencing removed for work. These shall be incidental to the project.**

SIGN-IN SHEET

Johnson County, Missouri - UV System
Oct. 9, 2024

NAME	COMPANY	EMAIL	PHONE
Cody Crow	McCLURE	ccrow@ McClurevision.com	816-756-0444
Jason Shackles	JCSU	jshackles@jocomosheriff.org	816-842-1800
Jim Garton	Empire 21st	Jim.garton@empireelectric.biz	
Chad Shippy	SHIPPY ELECTRIC	Chad@ShippyElectric.com	660-441-7538
Corey D'Veill	Mega KC	Bids@MegaKC.com	816-225-8532
Ethan McPeak	Dirks Heavy Contractors	ethan@dirkshavy.com	660-679-1318
Joe Epps	JACOME SHERIFF		660-624-9124

**ADDENDUM NO. 3
TO
PLANS AND SPECIFICATIONS
FOR THE**

**JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION
JOHNSON COUNTY COMMISSION
JOHNSON COUNTY, MISSOURI**

MEC PROJECT NO. 2023001670

TO ALL PLAN HOLDERS:

This Addendum No. 3 shall be attached to and become part of the Contract Documents for the "JOHNSON COUNTY DETENTION CENTER WWTP UV ADDITION, JOHNSON COUNTY, MISSOURI" project. The Specifications and Plans shall be changed and added to as follows:

PLAN SHEETS

Replace GN-03 with plan sheet marked Addendum No. 3 dated 10-22-24

Replace C-01 with plan sheet marked Addendum No. 3 dated 10-22-24

Replace ME-01 with plan sheet marked Addendum No. 3 dated 10-22-24

Replace ME-02 with plan sheet marked Addendum No. 3 dated 10-22-24

END PLAN SHEET CHANGES

If you have any questions, please contact Coby Crowl at 816-502-3909.

Sincerely,

McCLURE ENGINEERING COMPANY

Coby Crowl, P.E.
Team Leader



GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL PROVIDE ONE MARK-UP SET OF RECORD DRAWINGS TO THE ENGINEER INCLUDING ALL AS-BUILT UTILITIES, STRUCTURES, AND GRADES AT THE COMPLETION OF THE PROJECT.
3. ANY PROPOSED CHANGES TO THE PLAN SET DURING CONSTRUCTION MUST RECEIVE WRITTEN APPROVAL FROM THE ENGINEER.

COORDINATION NOTES

- 1. THE CONTRACTOR SHALL PROVIDE SUBMITTALS OF ALL PROPOSED CONSTRUCTION MATERIALS AND EQUIPMENT PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR SETTING UP A PRE-CONSTRUCTION CONFERENCE WITH THE OWNER AND ENGINEER AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
3. AT LEAST ONE WEEK PRIOR TO ANY CONSTRUCTION WITHIN ANY PUBLIC RIGHT-OF-WAY, EASEMENT, AND/OR ANY CONNECTION TO PUBLIC SEWERS AND STREETS, THE CONTRACTOR SHALL CONTACT THE OWNER AND THE ENGINEER.

SURVEY AND STAKING NOTES

- 1. ELEVATION BENCHMARKS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ELEVATIONS AND DIMENSIONS AND MAKE ADJUSTMENTS ACCORDINGLY UNDER THE DIRECTION OF THE ENGINEER.
2. ANY EXISTING PROPERTY CORNER PINS OR MONUMENTS DAMAGED OR DESTROYED BY CONSTRUCTION SHALL BE RESET BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UPON COMPLETION OF THE PROJECT AND PRIOR TO FINAL PAYMENT.

GRADING AND SEEDING NOTES

- 1. ALL SPOT ELEVATIONS ARE TO THE TOP OF FINISHED GRADE, UNLESS OTHERWISE NOTED.
2. BACKFILL TO TOP OF CURB (MINUS 1-1/2" FOR SOD, IF REQUIRED).
3. ALL SLOPES IN GRADING SHALL BE UNIFORM TO AVOID PONDING.
4. ALL SLOPES IN UNPAVED AREAS SHALL BE GRADED TO DRAIN AT 2% MINIMUM, UNLESS NOTED OTHERWISE.

TRAFFIC CONTROL NOTES

- 1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MAINTAIN ALL ROADWAYS BEING USED NEAR THE CONSTRUCTION SITE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
3. THE CONTRACTOR SHALL PROVIDE CONTINUOUS ACCESS TO THE SITE TO THE OWNER.

CONFLICTING UTILITIES NOTES

- 1. THE LOCATION OF KNOWN EXISTING UNDERGROUND UTILITIES ARE SHOWN ON THE DRAWINGS AND ARE BELIEVED TO BE ESSENTIALLY CORRECT. NO GUARANTEE IS MADE RELATIVE TO THE COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES.
2. ALL EXISTING UTILITIES, SERVICES, POLES, AND CONNECTIONS SHALL BE PROTECTED AT THE CONTRACTOR'S EXPENSE. IF DAMAGE IS CAUSED BY CONSTRUCTION TO ANY EXISTING UTILITY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR RESTORATION OF SAME, IN

- 3. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF THE UTILITY OR STRUCTURE AND ITS EFFECT ON THE NEW CONSTRUCTION.
4. EXISTING OR NEW PIPING WITHIN ANY EXCAVATION SHALL BE ADEQUATELY SUPPORTED WITH HAUNCHES, SUPPORT BEAMS, FILL CONCRETE, OR COMPACTED TYPE 'A' FILL AS APPROVED BY THE ENGINEER.
5. ALL FIELD UTILITIES ENCOUNTERED SHALL BE REPAIRED AND RECONNECTED. LOCATIONS SHALL BE PROVIDED TO THE ENGINEER FOR NOTATION IN AS-BUILT DRAWINGS.

PAVING NOTES

- 1. CONTRACTOR IS TO PROTECT EXISTING PAVEMENT UNLESS DESIGNATED FOR REMOVAL. DAMAGED PAVEMENT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
2. NEW PAVEMENT SHALL BE CONSTRUCTED WITH UNIFORM TRANSITIONS BETWEEN SPOT ELEVATIONS.
3. ANY EXCAVATION BENEATH NEW OR EXISTING PAVED AREAS OR SIDEWALKS SHALL BE BACKFILLED WITH GRANULAR MATERIAL COMPACTED TO 95% MAXIMUM IN-PLACE DENSITY FROM THE BOTTOM OF EXCAVATION TO THE UNDERSIDE OF PAVEMENT OR SIDEWALK.

SANITARY SEWER PIPING NOTES

- 1. ALL SANITARY MANHOLES, SEWER MAINS, AND SERVICE LATERAL CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE SECTION 33 30 00 - SANITARY UTILITY SYSTEMS.
2. EXCAVATED TRENCHES UNDER NEW OR EXISTING PAVEMENT OR SIDEWALK SHALL BE BACKFILLED TO 95% OF MAXIMUM IN-PLACE DENSITY.
3. ALL SANITARY SEWER PIPING SHALL BE SLOPED UNIFORMLY BETWEEN GIVEN ELEVATIONS UNLESS APPROVED OTHERWISE.
4. SANITARY SEWER PIPING SHALL HAVE A MINIMUM COVER OF 5-FEET UNLESS INDICATED OTHERWISE.

DEMOLITION AND DISPOSAL NOTES

- 1. OWNER HAS FIRST RIGHT OF REFUSAL ON ALL MATERIAL AND EQUIPMENT REMOVED.
2. UNLESS NOTED OTHERWISE, PIPES SHOWN TO BE DEMOLISHED SHALL BE ABANDONED IN PLACE IN ACCORDANCE WITH SECTION 02 41 00 - DEMOLITION.
3. CATCH BASINS AND MANHOLES THAT ARE TO BE DEMOLISHED SHALL BE REMOVED COMPLETELY IN AREAS OF NEW CONSTRUCTION.

SAFETY NOTES

- 1. OSHA PROHIBITS CRANE AND BACKHOE OPERATIONS WITHIN 10-FEET OF ENERGIZED PRIMARY CONDUCTORS. TEMPORARY RELOCATION OF ELECTRICAL UTILITIES, INCLUDING RESTRAINT OF POLES, RELOCATION OF POLES, AND RUBBER COVERING OF ENERGIZED CONDUCTORS MAY BE REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS INCLUDING, BUT NOT LIMITED TO, EXCESS SOIL, ROCK, OR ANY OTHER TYPE MATERIALS.

BY-PASS PUMPING

- 1. CONTRACTOR TO PROVIDE BY-PASS PUMPING OF PLANT EFFLUENT AS NEEDED FOR VAULT EXCAVATION AND TIE IN OF NEW UV SYSTEM. AVERAGE FLOW FROM PLANT IS 9600 GALLONS. COORDINATE BY-PASS METHOD AND TIMING WITH ENGINEER AND OPERATOR.

UTILITY COMPANIES table with columns SERVICE, SUPPLIER, PHONE. Includes entries for Electric Gas, Data, Water, Sewer, All, and Wastewater Plant Operator.

EXISTING UTILITIES NOTE
THESE EXISTING UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGING THEM.

McCLURE logo and contact information: 2001 W Broadway, Columbia, MO 65203, P 573-814-1568. Locations listed include Ankeny, IA, Carroll, IA, Clive, IA, Cedar Rapids, IA, Fort Dodge, IA, North Liberty, IA, Sioux City, IA, Macon, MO, Columbia, MO, North Kansas City, MO, Lenexa, KS.

NOTICE: McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans and Specifications.

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253 EXPIRES: DECEMBER 31, 2024



REVISIONS
ADDENDUM #3 10/22/2024

PROJECT INFO
2023001670-000
PROJECT RELEASE DATE
10/22/2024
ENGINEER: MMH, DRAWN BY: JMB, CHECKED BY: MMH

JOHNSON CO. DETENTION CENTER
WWTP UV ADDITION
CENTERVIEW, MISSOURI
GENERAL NOTES

DRAWING NO.
GN-03

NOTICE:
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MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253
 EXPIRES: DECEMBER 31, 2024

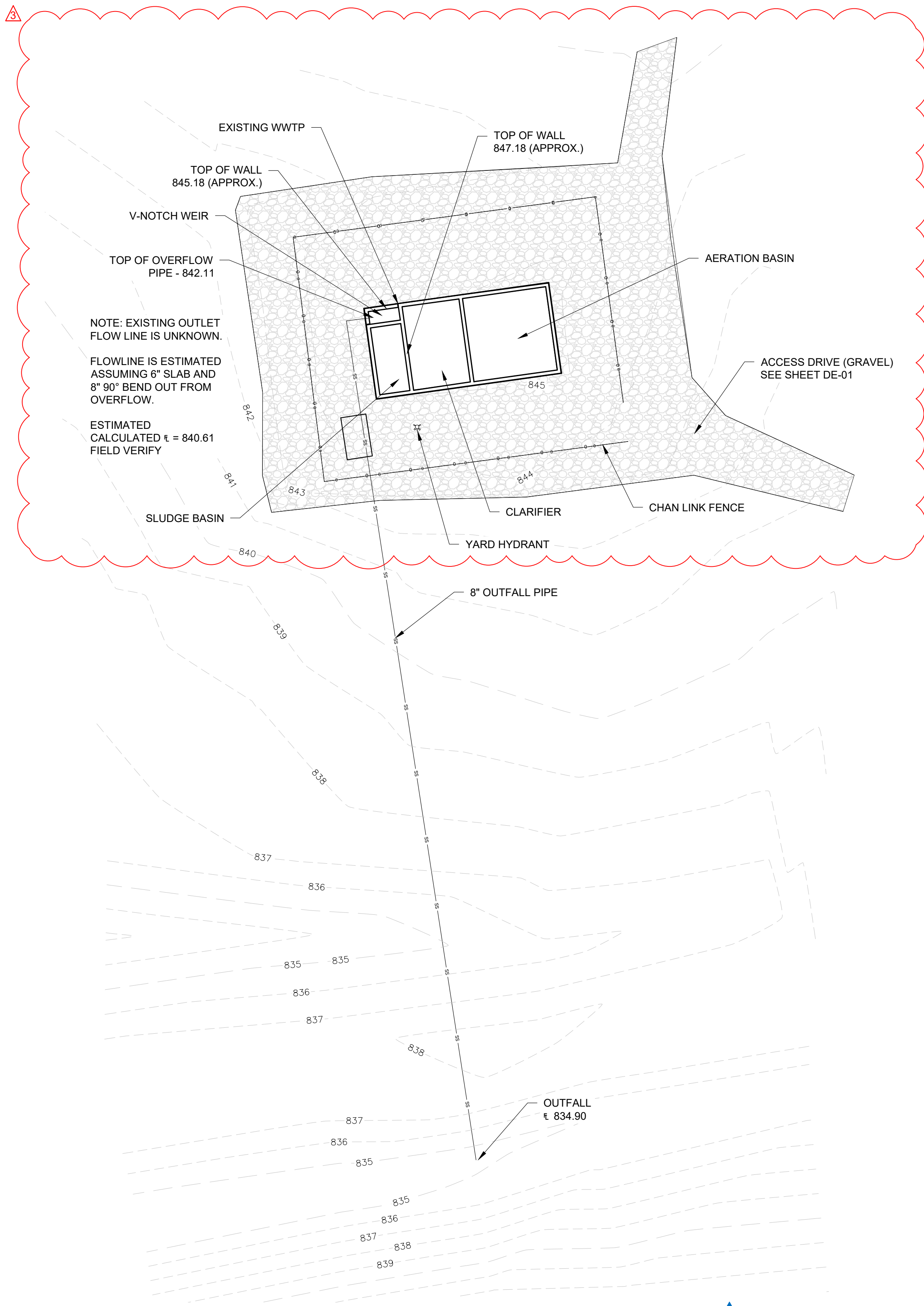


REVISIONS
 DNR COMMENTS 03/04/24
 ADDENDUM #3 10/22/2024

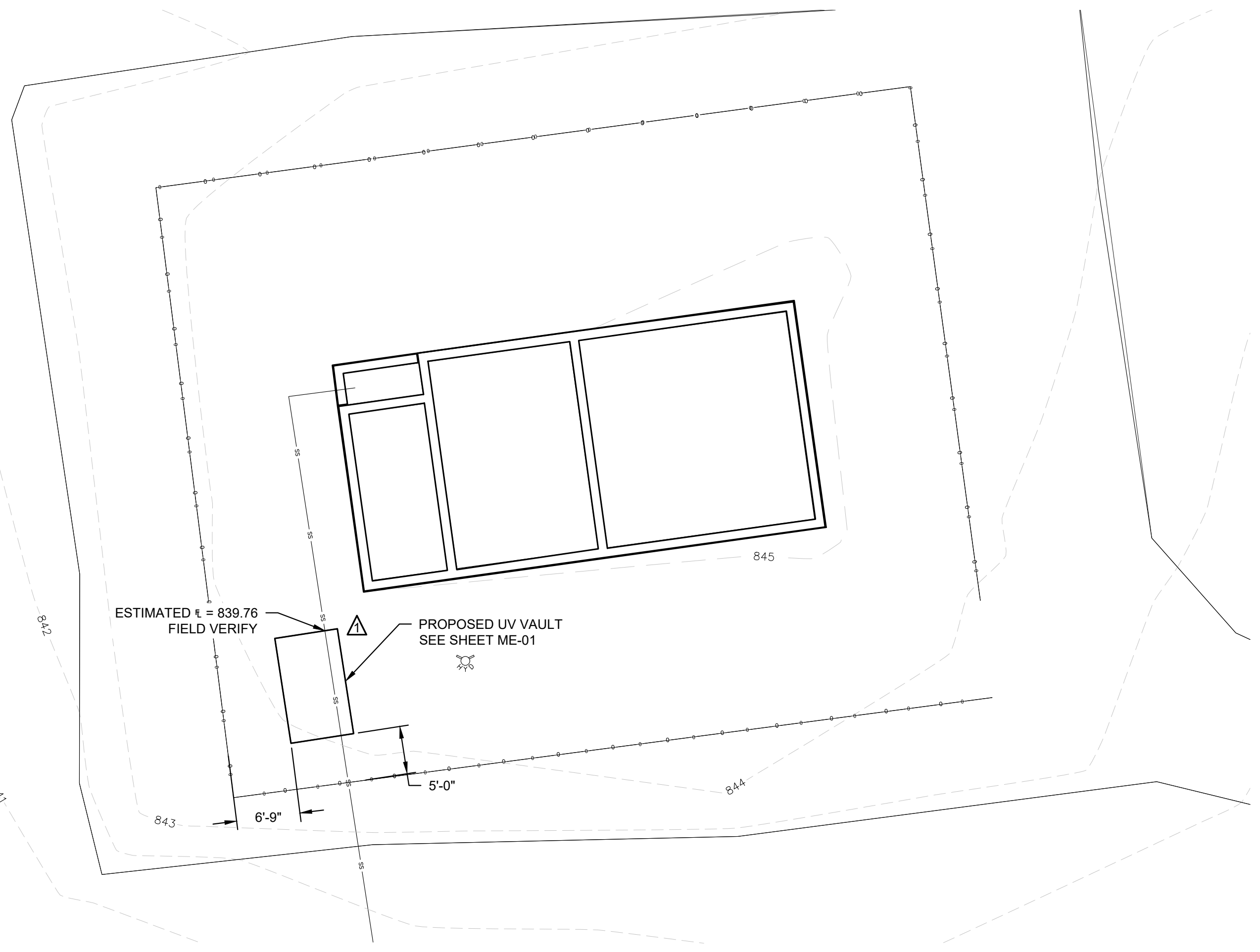
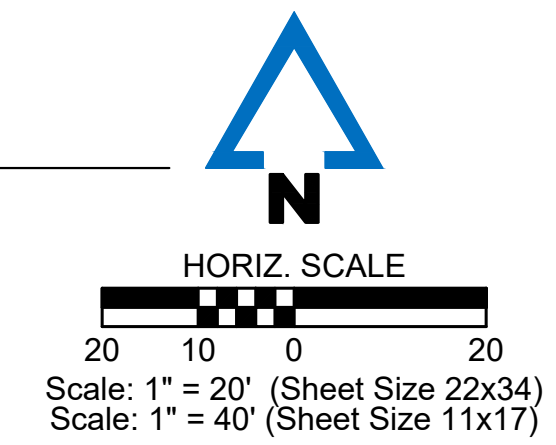
PROJECT INFO
 2023001670-000
PROJECT RELEASE DATE
 10/22/2024
ENGINEER JMB **CHECKED BY** MMH
DRAWN BY

**JOHNSON CO. DETENTION CENTER
 WWTP UV ADDITION
 CENTERVIEW, MISSOURI**
SITE PLAN

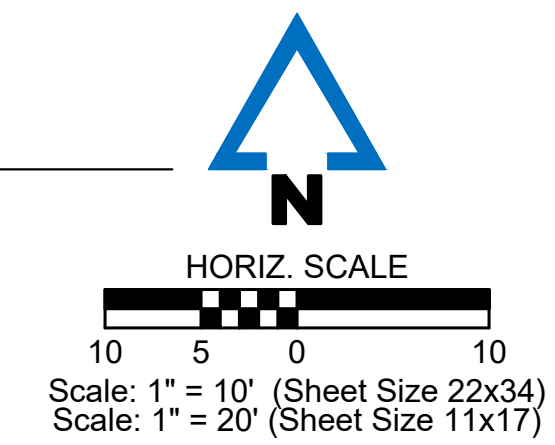
DRAWING NO.
 C-01



1 EXISTING SITE PLAN
 SCALE: 1" = 20'-0" (22X34) (FULL SIZE)
 SCALE: 1" = 40'-0" (11X17) (HALF SIZE)



2 PROPOSED SITE PLAN
 SCALE: 1" = 10'-0" (22X34) (FULL SIZE)
 SCALE: 1" = 20'-0" (11X17) (HALF SIZE)



PROJECT CONTROL POINTS TABLE			
CP#	NORTHING	EASTING	ELEV. DESCRIPTION
200	931450.28'	2955609.54'	844.26' PK NAIL
201	931257.36'	2955703.02'	845.32' PK NAIL
202	931563.47'	2955471.03'	844.72' 90D NAIL
203	931571.83'	2955372.29'	846.21' 90D NAIL

P:\2023001670-000- JOHNSON COUNTY COMM. WWTP DET CENTER\DRAWINGS\05-PLANS\2023001670\000-C-01.DWG

NOTICE:
 McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans and Specifications.

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253
 EXPIRES: DECEMBER 31, 2024



REVISIONS
 Δ DNR COMMENTS 03/04/24
 Δ DNR COMMENTS 03/10/24
 Δ ADDENDUM #3 10/22/2024

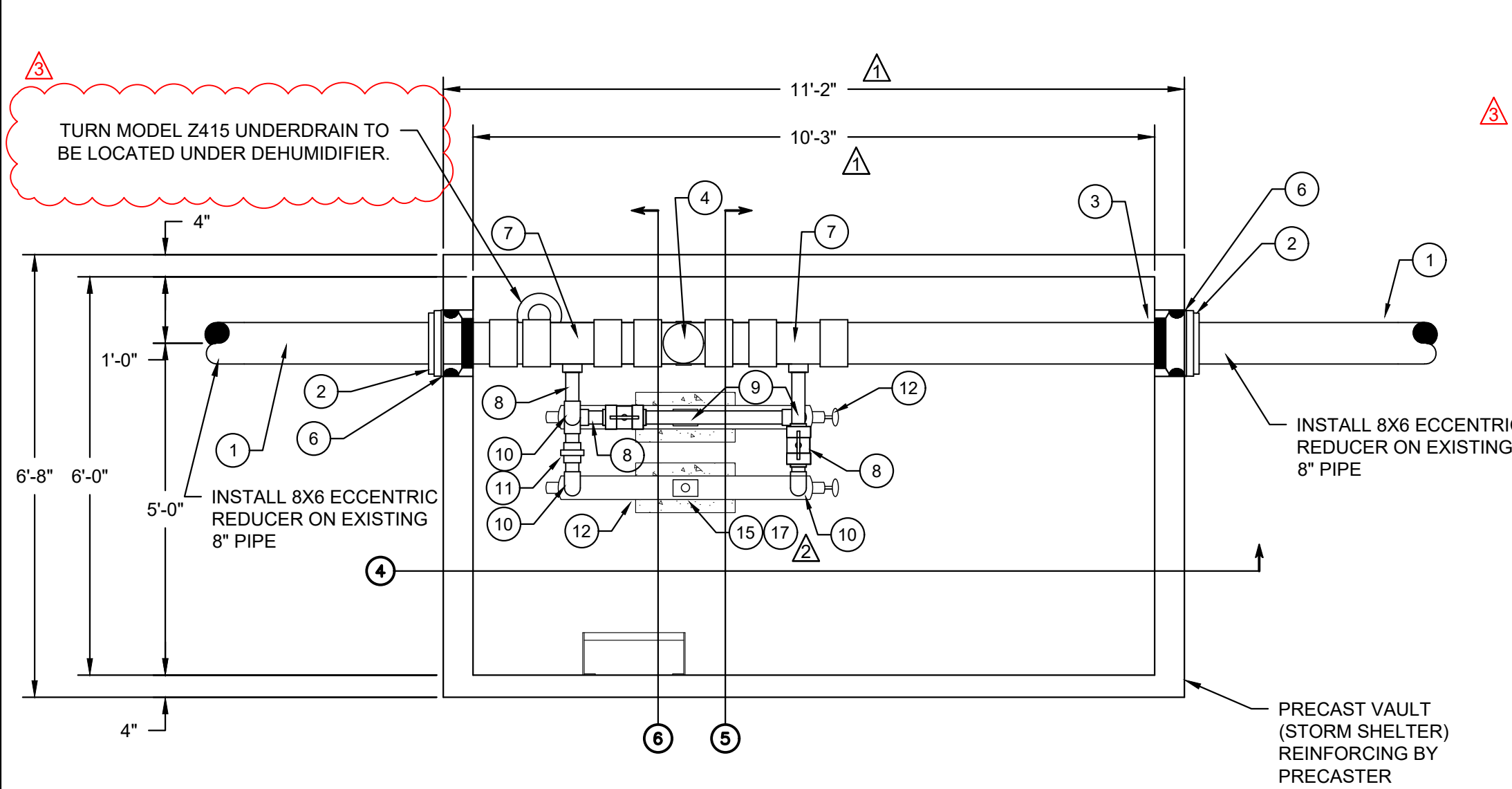
PROJECT INFO
 2023001670-000
 PROJECT RELEASE DATE
 10/22/2024

ENGINEER: MMH
 DRAWN BY: JMB
 CHECKED BY: MMH

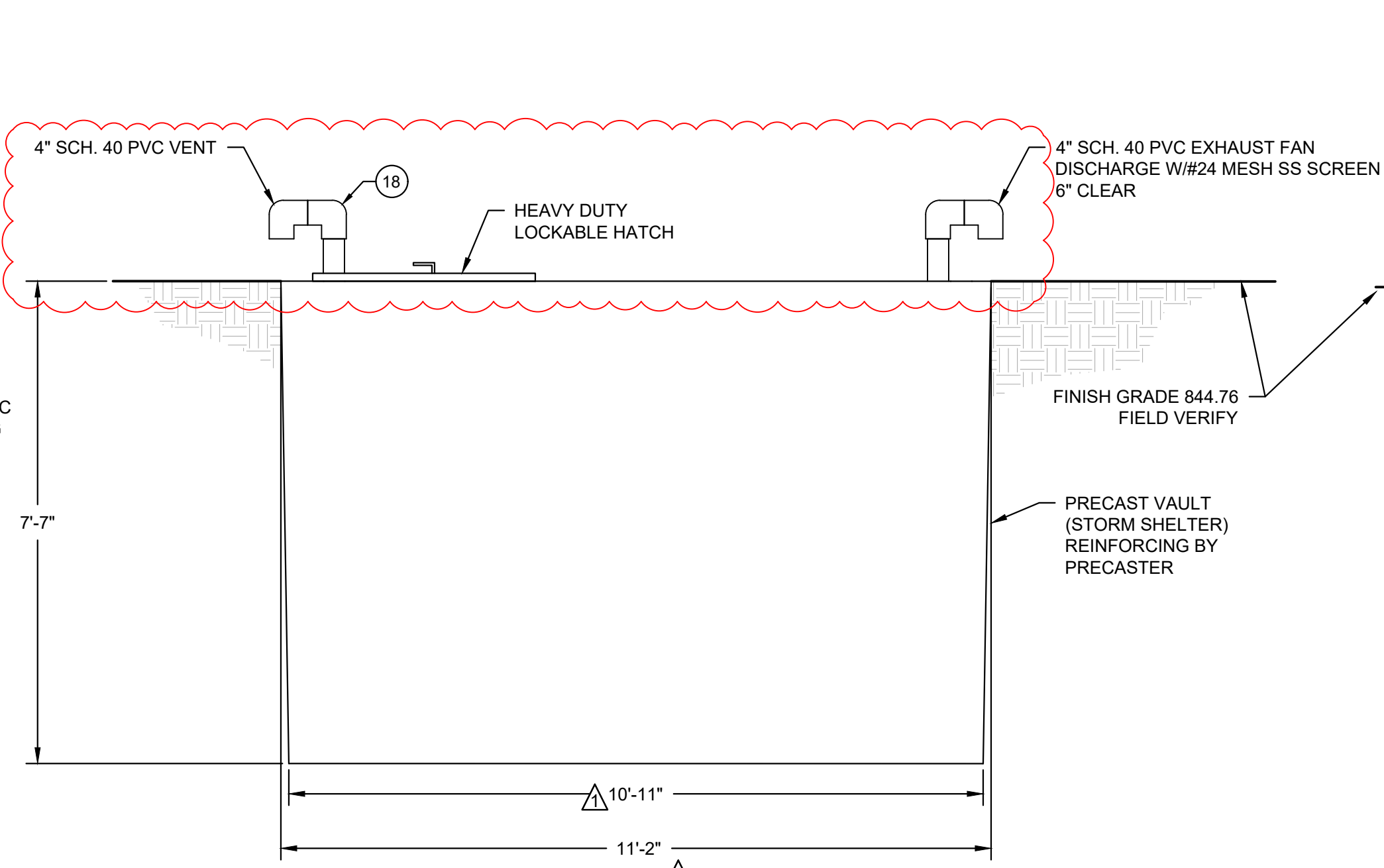
**JOHNSON CO. DETENTION CENTER
 WWTP UV ADDITION
 CENTERVIEW, MISSOURI**

MECHANICAL PLAN & DETAILS

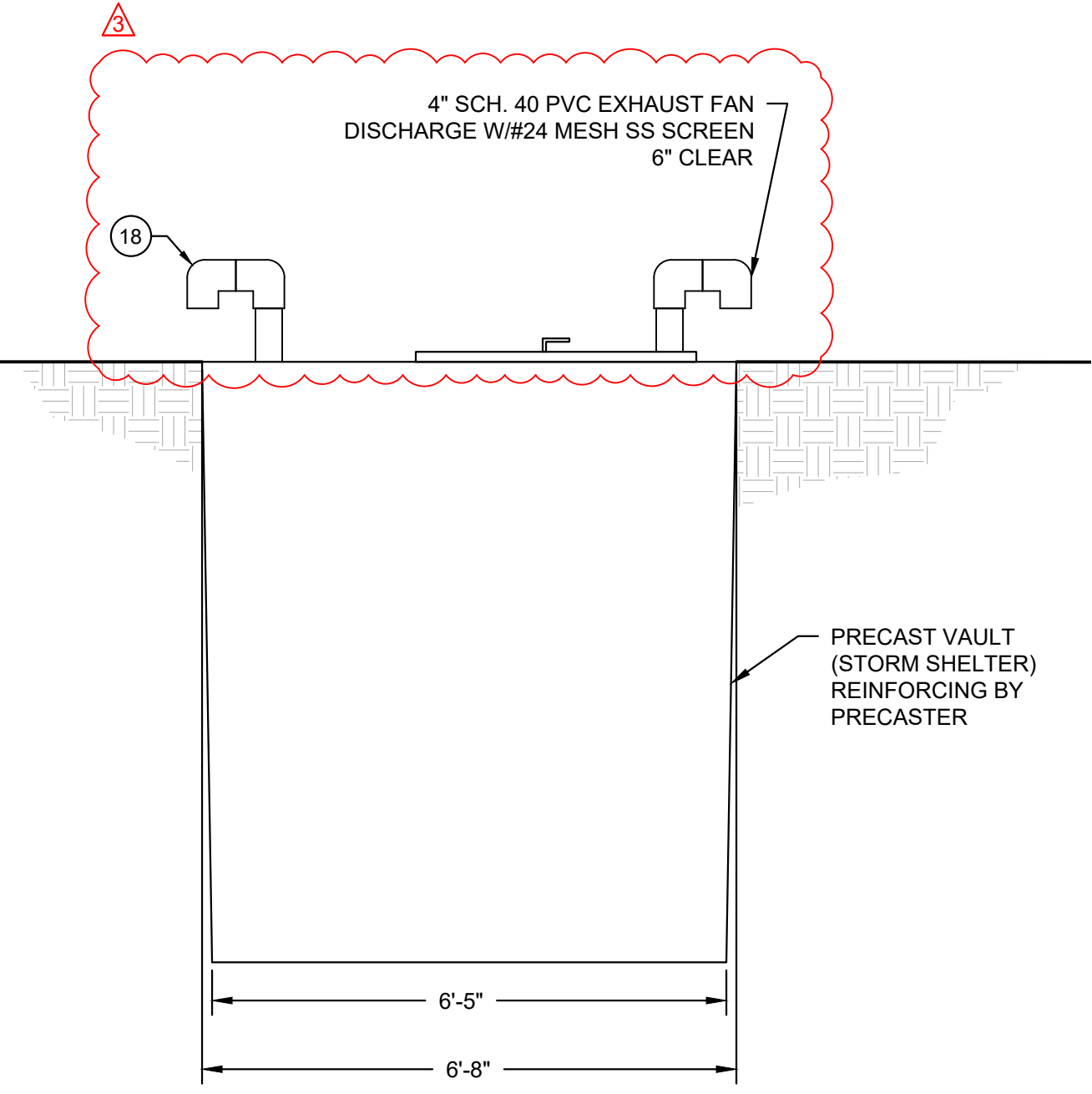
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ME-01



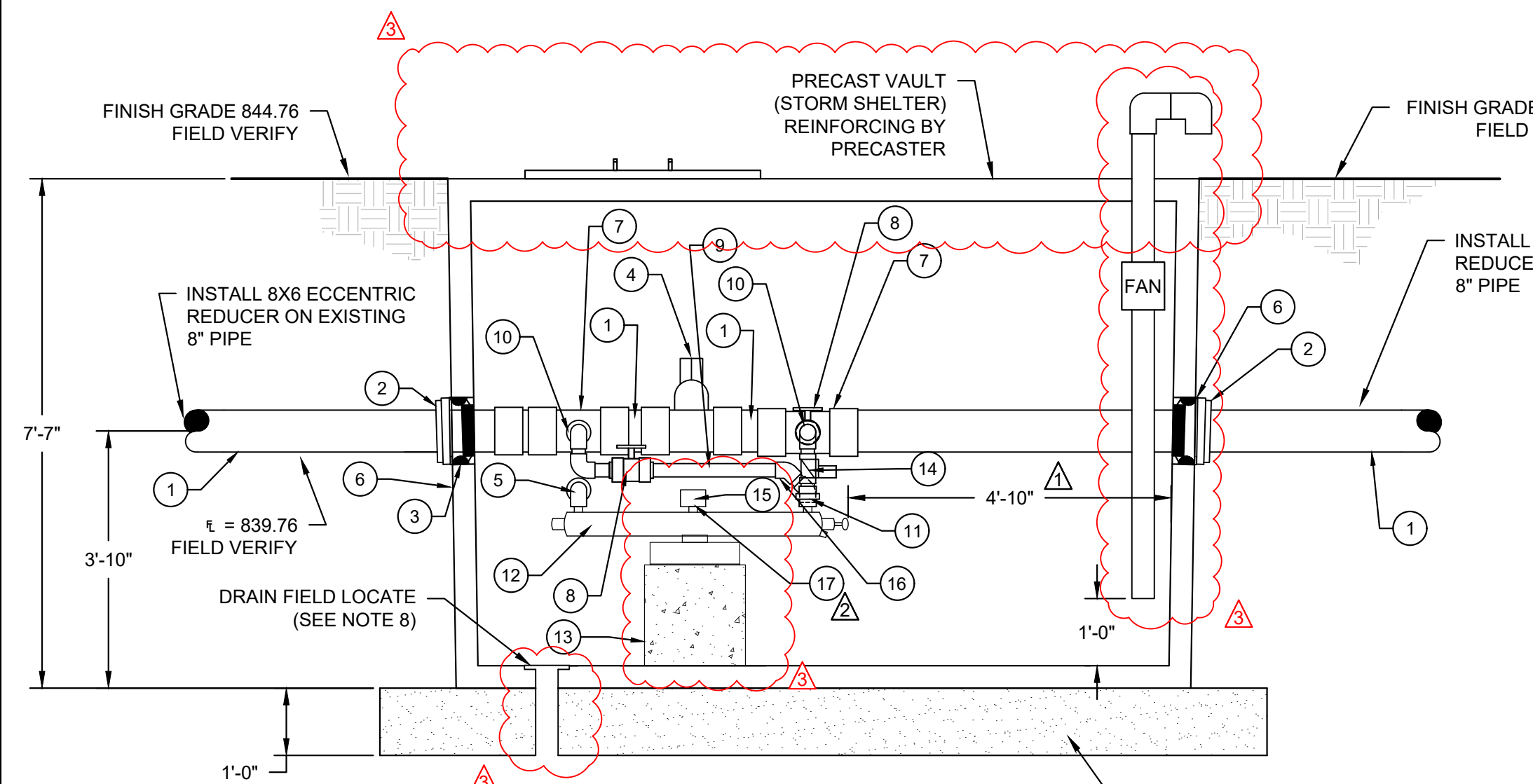
1 PIPING PLAN
 SCALE: 1/2" = 1'-0"



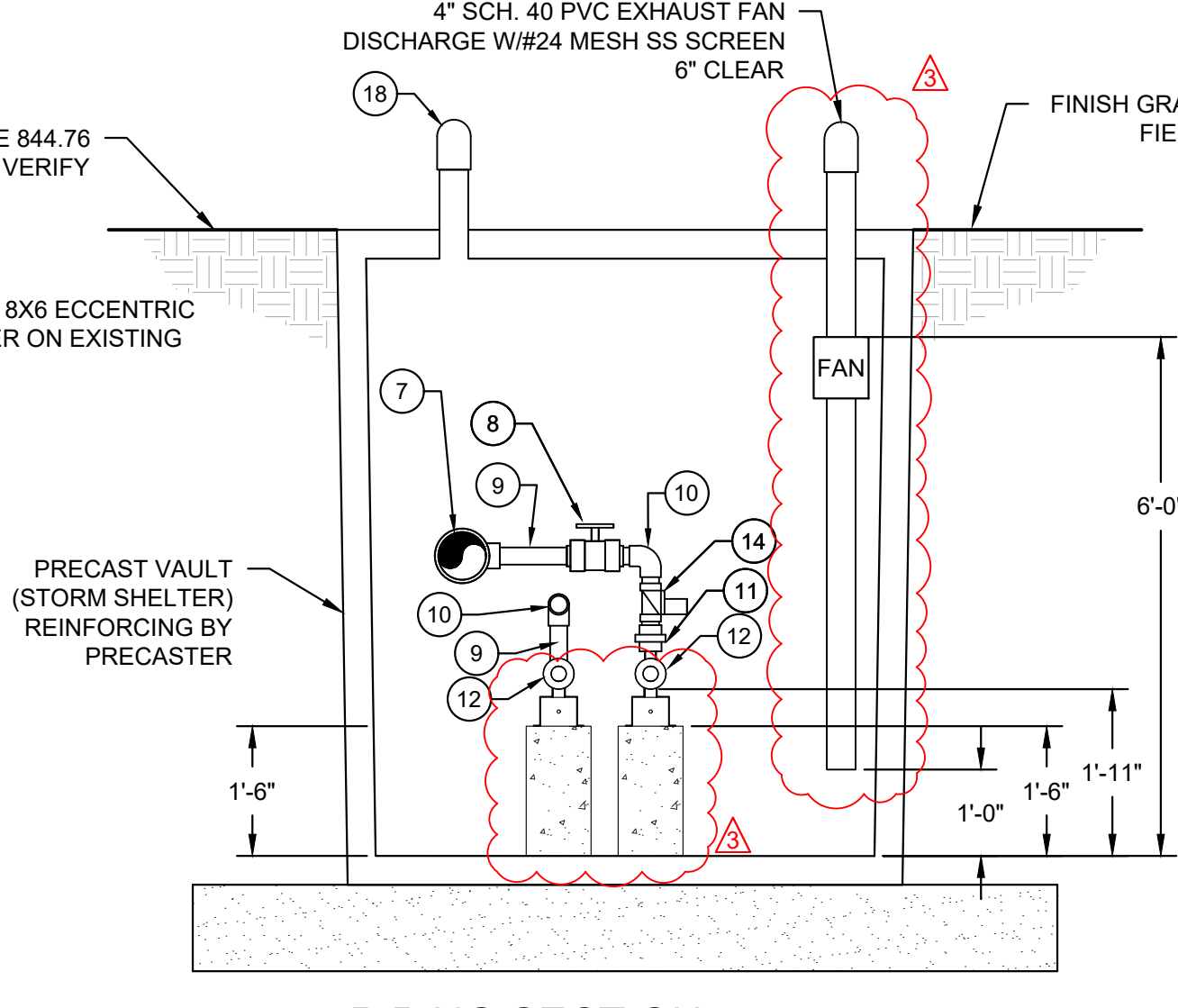
2 OUTSIDE VAULT ELEVATION
 SCALE: 1/2" = 1'-0"



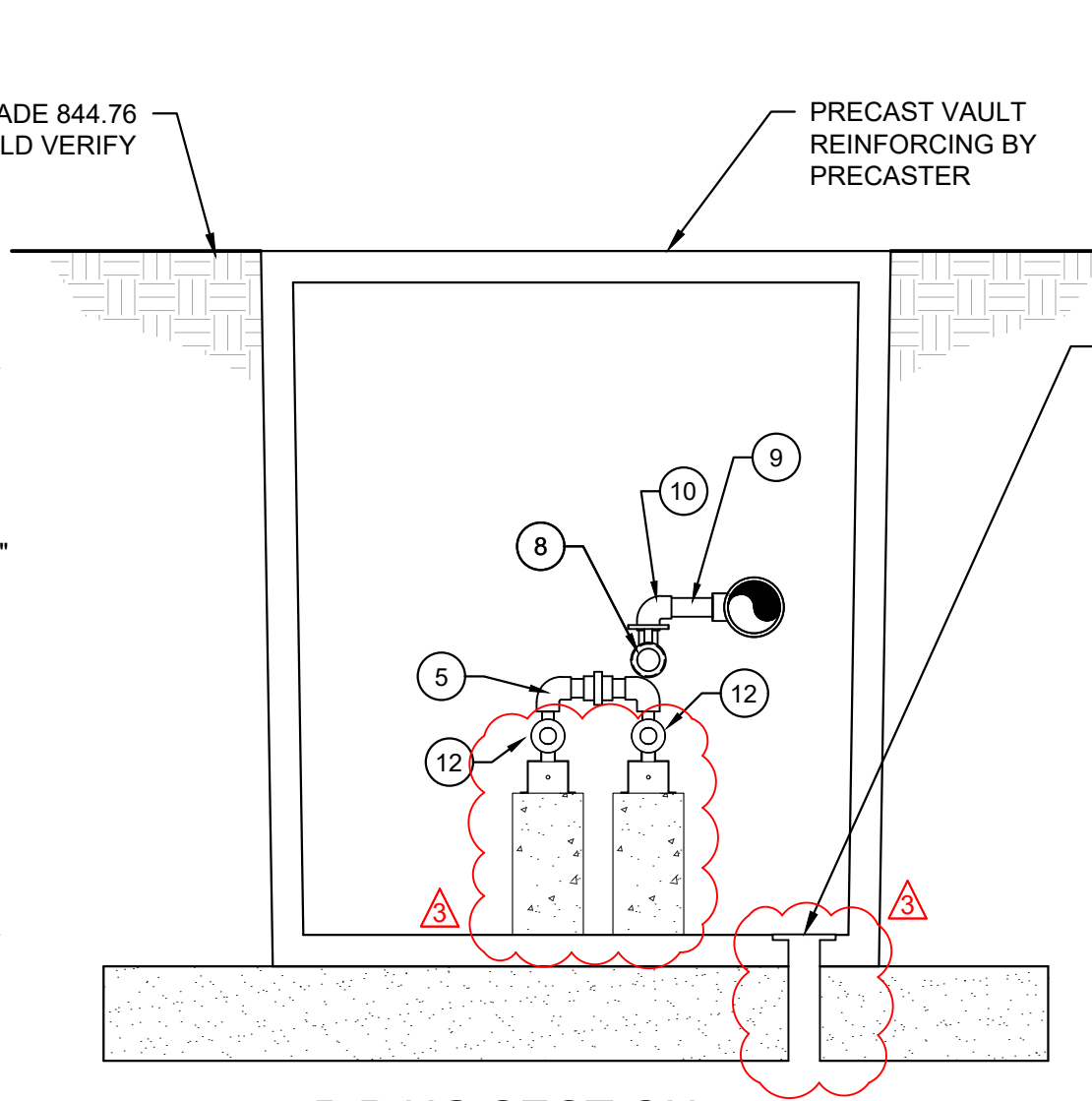
3 OUTSIDE VAULT ELEVATION
 SCALE: 1/2" = 1'-0"



4 PIPING SECTION
 SCALE: 1/2" = 1'-0"

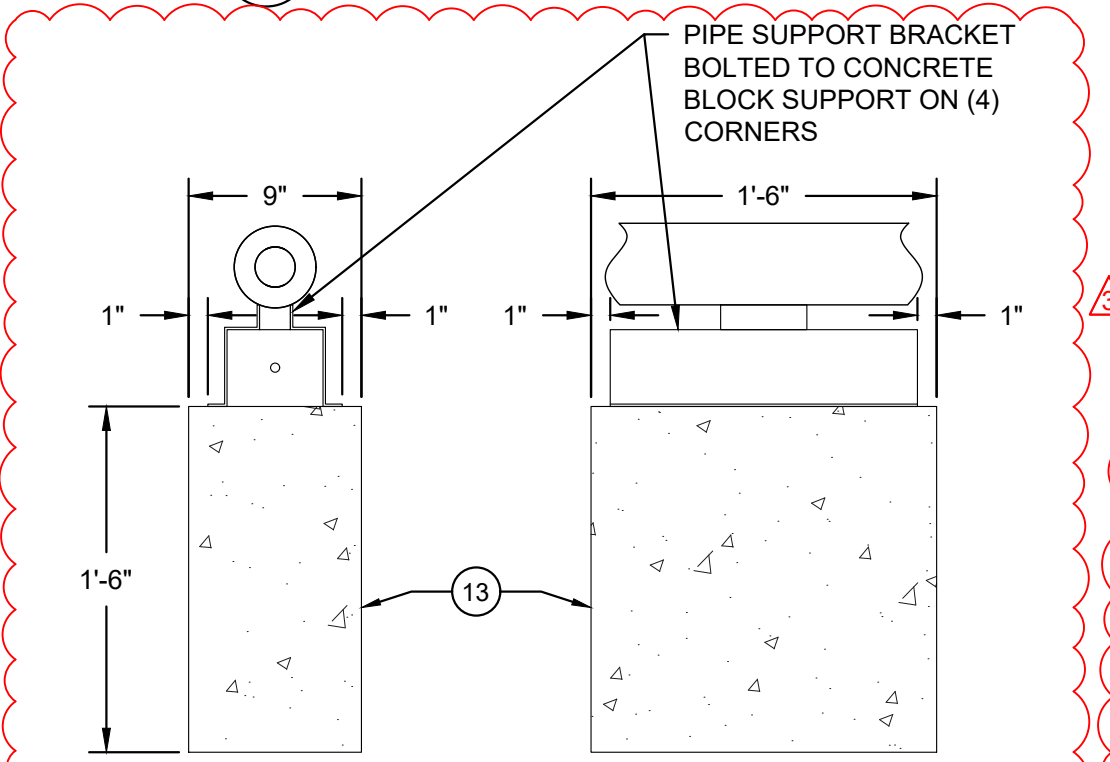


5 PIPING SECTION
 SCALE: 1/2" = 1'-0"



6 PIPING SECTION
 SCALE: 1/2" = 1'-0"

PIPING SCHEDULE	
1	6" SCH. 80 PVC
2	6" RETAINER GLAND (MEGA-LUG)
3	Z-LOK FLEXIBLE MANHOLE CONNECTOR
4	6" SCH. DIP GATE VALVE WITH HANDWHEEL
5	PVC FITTINGS SUPPLIED BY UV SUPPLIER
6	12" DIA. X 3/8" PLATE STEEL WASHER & GASKET
7	6"x2" SCH. 80 REDUCING TEE - SOC. X SOC.
8	2" TRUE UNION BALL VALVE
9	2" SCH. 80 PVC PIPE
10	2" SCH. 80 PVC 90° BEND
11	2" SCH. 80 THRD X SOC. UNION
12	SANITRON MODEL S5,000C UV UNIT (ONE UNIT HAS 2 CHAMBERS)
13	CONCRETE BLOCK SUPPORT
14	SANITRON PROMATE SOLENOID VALVE. INSTALL PER MANUFACTURES INSTRUCTIONS
15	SANITRON GUARDIAN DIGITAL ULTRAVIOLET MONITOR WITH STANDARD PROBE. (2 REQUIRED) PROVIDE POWER ADAPTOR
16	2" SCH. 80 PVC 45° BEND
17	SANITROL PROMATE ELAPSED TIME INDICATORS AND TIME DELAY MECHANISMS. (2 REQUIRED)
18	INTAKE & EXHAUST VENT



A PIPE SUPPORT DETAIL
 SCALE: 1" = 10'-0"

- GENERAL NOTES:**
- LAPPING OF WATERSTOPS SHALL NOT BE PERMITTED. WATERSTOPS SHALL BE BUTT WELDED.
 - CONCRETE PLACEMENTS ARE TO END AT CONSTRUCTION JOINTS.
 - WATERSTOPS ARE REQUIRED AT ALL CONSTRUCTION JOINT LOCATIONS.
 - FILL ALL CONSTRUCTION JOINTS WITH POLYURETHANE CAULK.
 - ALTERNATE POUR SEQUENCE SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 - PRECASTER MAY PROPOSE ALTERNATE VAULT DESIGN FOR ENGINEER APPROVAL PRIOR TO CONSTRUCTION.
 - INSTALL VENTILATION FAN, LIGHTING, DEHUMIDIFIER AND HEATER PER ELECTRICAL PLAN SHT - ME-02.
 - CORE DRILL ALL OPENINGS IN CONCRETE FOR PIPE. PROVIDE LINK SEAL BY THUNDERLINE FOR PVC PIPE PENETRATION ON FAN AND FLOOR DRAIN.
 - VAULT IS ANTICIPATED TO BE PRE-CAST STORM SHELTER MANUFACTURED BY STEWART CONCRETE PRODUCTIONS. CONTRACTOR AT THEIR OPTION USE A FLAT TOP VAULT. USE WATERPROOF HALIDAY HATCH WITH STEPS MOUNTED IN WALL. COORDINATE LOCATION OF PANEL, HEATER, AND OTHER COMPONENTS WITH ENGINEER.

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NOTICE:
 McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans and Specifications.

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253
 EXPIRES: DECEMBER 31, 2024



REVISIONS
 DNR COMMENT 03/10/24
 ADDENDUM #3 10/22/2024

PROJECT INFO
 2023001670-000
 PROJECT RELEASE DATE 10/22/2024
 ENGINEER: MMH DRAWN BY: JMB CHECKED BY: MMH

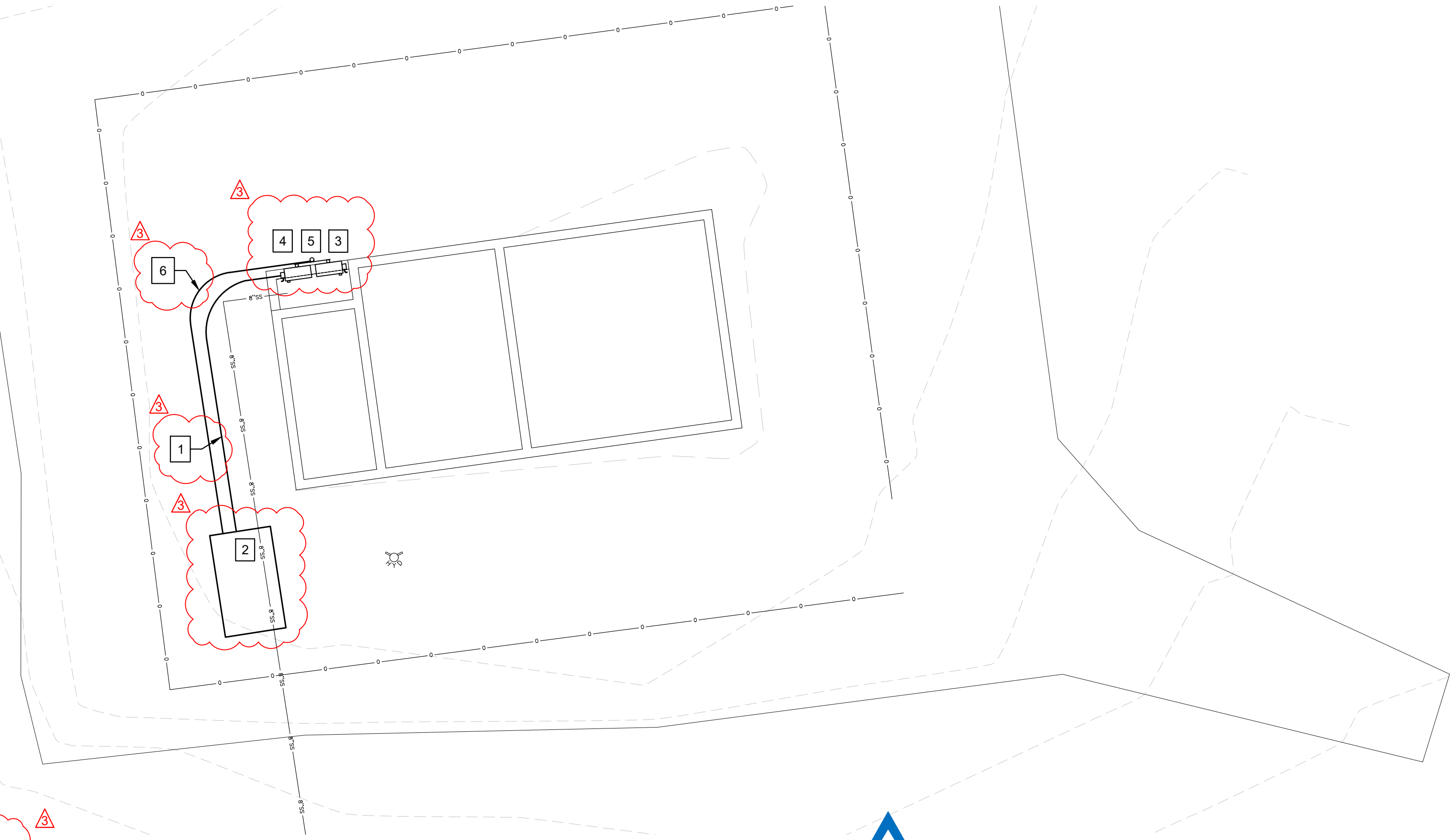
**JOHNSON CO. DETENTION CENTER
 WWTP UV ADDITION
 CENTERVIEW, MISSOURI**

ELECTRICAL SITE PLAN & DETAILS

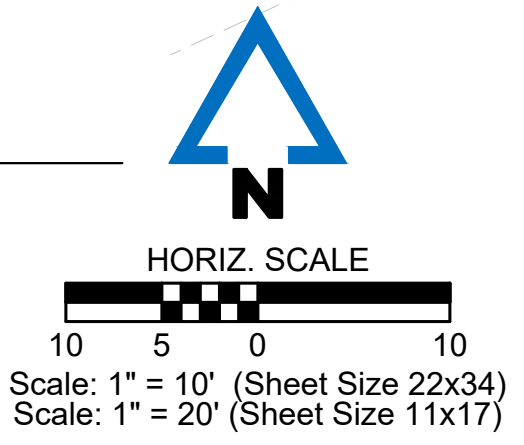
DRAWING NO. ME-02

- ELECTRICAL SITE PLAN NOTES:**
- PROVIDE (3), #10 AWG AND (1) #10 AWG G IN 1" PVC BURIED 2' BELOW GRADE FROM NEW DISCONNECT ON CONTROL PANEL TO VAULT.
 - PROVIDE 10 KVA DRY TYPE TRANSFORMER IN VAULT. REFER TO ONE LINE ON THIS SHEET.
 - PROVIDE NEW DISCONNECT FOR SERVICE. SEE ONE LINE DIAGRAM.
 - PROVIDE NEW DISCONNECT FOR VAULT. SEE ONE LINE DIAGRAM.
 - MOUNT LIGHT AND AUDIBLE ALARM FOR UV SYSTEM ON BACK SIDE OF CONTROL PANELS.
 - PROVIDE (2) #14, #14G IN A 3/4" SCH 40 PVC CONDUIT FROM UV SYSTEM TO EXTERNAL ALARMS.

- GENERAL NOTES:**
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND/OR ANY APPLICABLE STATE AND LOCAL CODES.
 - ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL EXPOSED EXTERIOR CONDUIT SHALL BE RIGID.
 - ALL EXTERIOR PANELS SHALL BE NEMA 3R.
 - ALL OUTSIDE AND BURIED WIRING (INCLUDING IN CONDUIT) SHALL BE THWN.

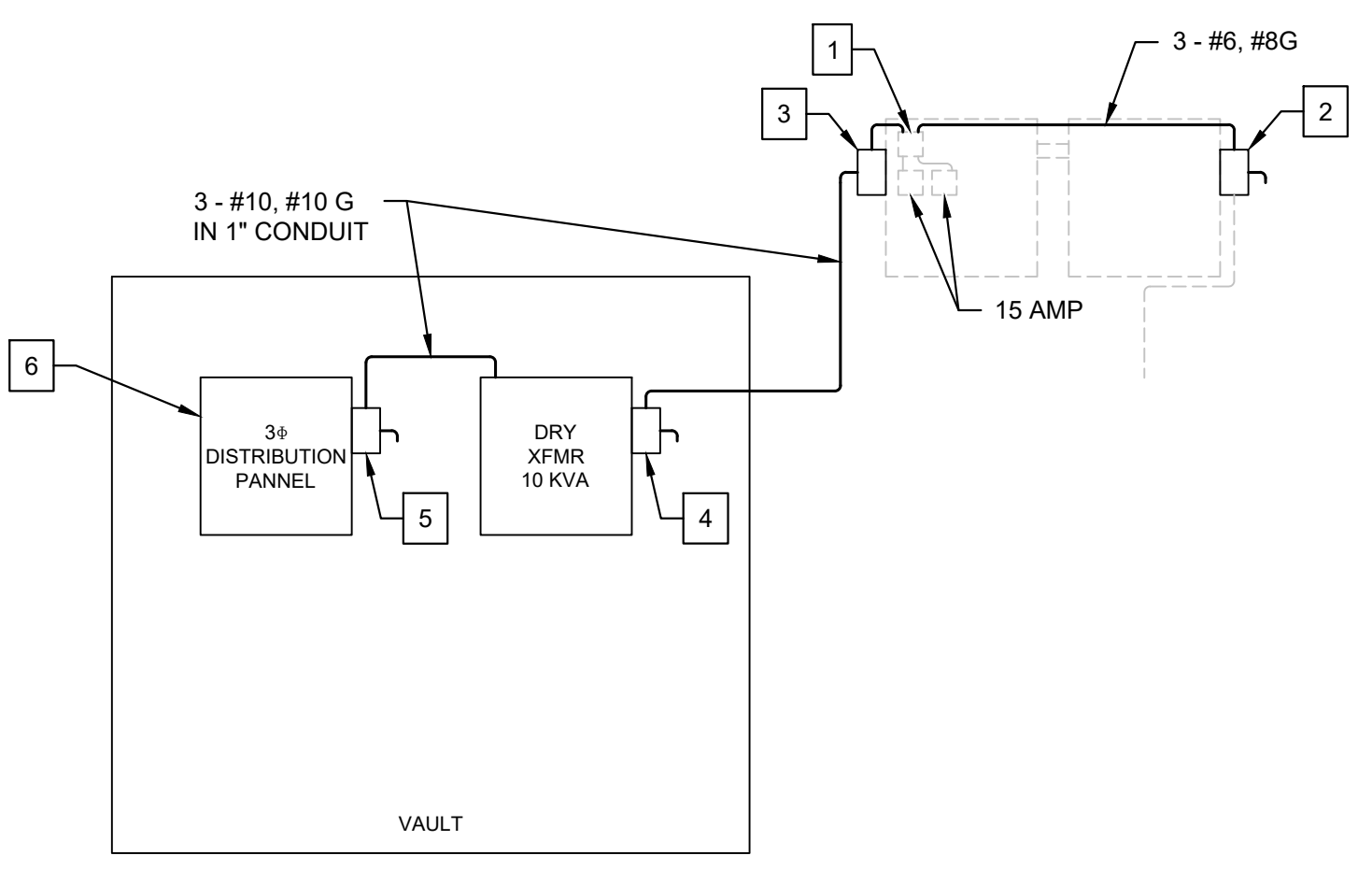


1 ELECTRICAL SITE PLAN
 SCALE: 1" = 10'-0" (22X34) (FULL SIZE)
 SCALE: 1" = 20'-0" (11X17) (HALF SIZE)

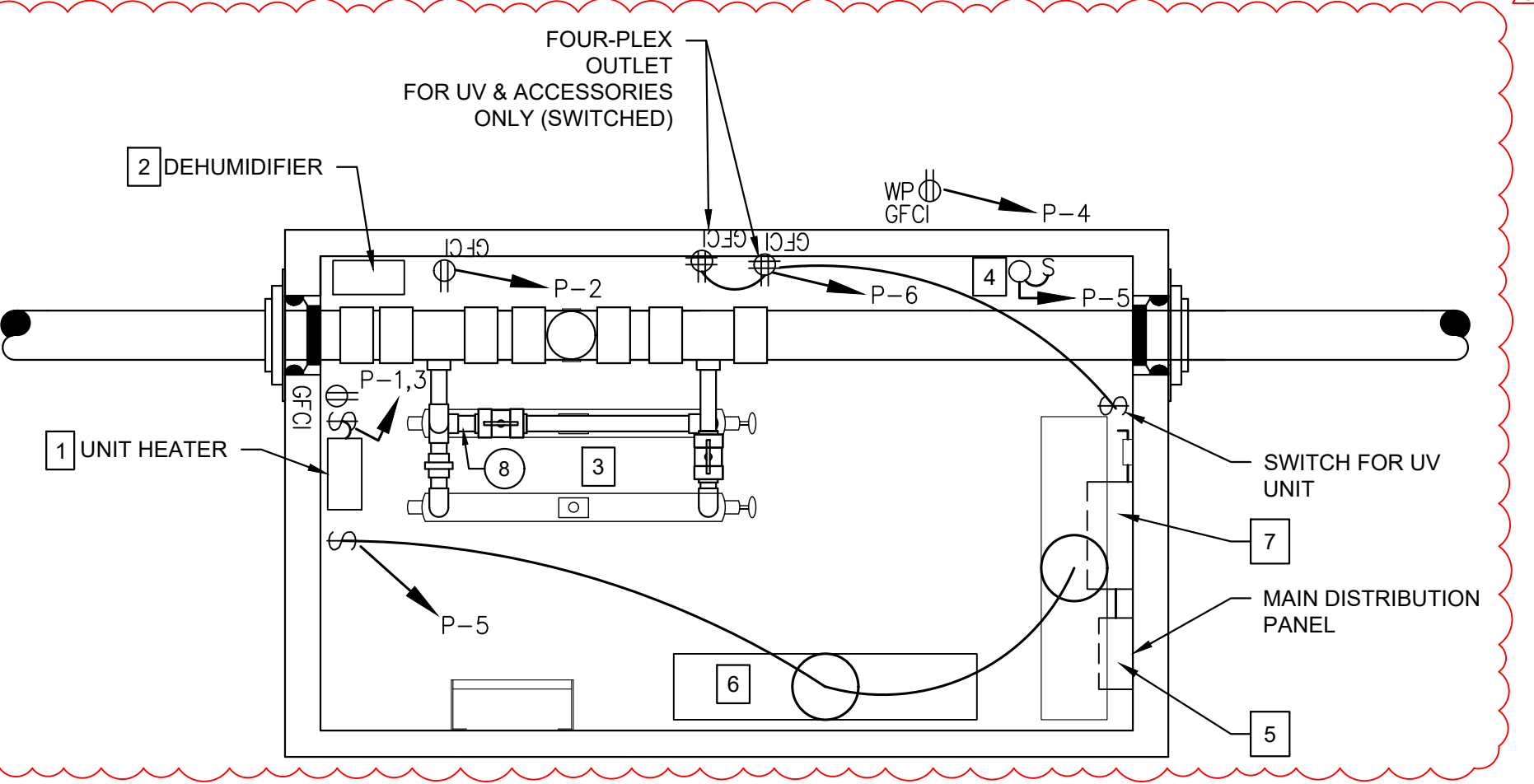


- UV POWER PLAN NOTES:**
- HEATER SHALL BE MARLEY MODEL MUH0321 OR EQUIVALENT, 3000W, 240/208V, 1 PHASE, WITH BUILT IN THERMOSTAT, PERMANENTLY LUBRICATED UNIT-BEARING MOTOR, WALL BRACKET, WITH 6' HEAVY DUTY CHORD AND PLUG TYPE #6-20P. PROVIDE RECEPTACLE TO MATCH PLUG TYPE.
 - DEHUMIDIFIER SHALL BE APRILAIRE MODEL E070 OR EQUIVALENT, CRAWL SPACE DEHUMIDIFIER TO REMOVE 53 PINTS PER DAY AT 73 DEG DRYBULB, 60% RELATIVE HUMIDITY. (70 PPD @ 80 DEG DRY BULB, 60% RH) BUILT IN DIGITAL CONTROL, WASHABLE MERV 8 FILTER, (PROVIDE TWO FILTERS), 10 FT HOSE FROM 3/4" HOSE FITTING TO DRAIN (CUT TO LENGTH) PROVIDE MODEL 5822 HANGING KIT. MOUNT TO WALL AT 4 FT ABOVE FLOOR.
 - UV UNIT SHALL BE SANITRON MODEL S5000C OR EQUIVALENT, 5000GPH, 2" INLET AND OUTLET, 2 LAMP (LAMP MODEL 05-1311-R), 120V, 280 WATTS, 100 PSI OPERATING PRESSURE, WITH GUARDIAN ULTRAVIOLET MONITOR, FLOW CONTROL VALVE, SENTRY SAFETY SENSOR WITH PROMATE AUDIO ALARM, PROMATE SOLENOID VALVE, AND PROMATE ELAPSED TIME INDICATOR. SUPPORT FROM FLOOR AT 24" INCHES ABOVE FLOOR. ENSURE ADEQUATE SPACE ON ONE END TO REPLACE LAMP.
 - FAN TO BE SOLER & PALAU MODEL TD-100 4" INLINE FAN OR EQUIVALENT TO MOVE 90 CFM AT 0" SP. MOUNT TO WALL AT 54" ABOVE FLOOR. EXTEND 3" PIPE TO WITHIN 12" OF FLOOR. EXTEND DISCHARGE THRU STRUCTURE AND TERMINATE WITH TWO 90 DEG ELLS. SEE ELEVATIONS ON SHEET ME-01. OPERATE WITH LIGHTS ON A SWITCH BESIDE THE HATCH.
 - ELECTRICAL PANEL SHALL BE 3 PHASE, 8 SPACES, SIEMENS MAIN LUG LOAD CENTER S1224L3125 OR EQUIVALENT. REFER TO PANEL SCHEDULE FOR CIRCUIT BREAKER SIZES AND TYPES. MOUNT TO WALL WITH BOTTOM AT 54" ABOVE FLOOR.
 - LIGHTS (2 EACH) SHALL BE LITHONIA MODEL FEML 48 3000LM LPAFL WD 120 40K80CRI LED SURFACE MOUNT VAPOR TIGHT, 18 WATT. OPERATE WITH FAN ON A SWITCH MOUNTED BESIDE THE HATCH.
 - TRANSFORMER SHALL BE 10 KVA DRY TYPE MADDOX OR EQUIVALENT. COORDINATE WITH POWER AT SITE ON PRIMARY VOLTAGE (480/ 240V OR 480 /277V). SECONDARY VOLTAGE SHALL BE 240/120V SINGLE PHASE. HANG TRANSFORMER ON WALL AT 36" ABOVE FLOOR. PROVIDE DISCONNECT IN CIRCUIT BEFORE TRANSFORMER.

- ONE LINE NOTES:**
- EXISTING TERMINAL BLOCK TO BE REUSED. REPLACE STRUTS AND MOUNTING BOARDS AS NEEDED WITH CCA #2 LUMBER, USING GALVANIZED NAILS OR SCREWS.
 - PROVIDE NEW 60A 3 PHASE DISCONNECT IN A NEMA 3R ENCLOSURE. FOR SERVICE TO EXISTING CONTROL PANELS. EATON MODEL DPU362RA OR EQUIVALENT.
 - PROVIDE NEW 40A, 3 PHASE FUSED DISCONNECT IN A NEMA 3R ENCLOSURE.
 - PROVIDE NEW 40A 3 PHASE NON FUSED DISCONNECT IN A NEMA 1 ENCLOSURE TO SERVE DRY TRANSFORMER. PROVIDE 10KVA TRANSFORMER TO CONVERT 480V PRIMARY POWER TO 120/240V SECONDARY POWER. CONFIRM PRIMARY POWER VOLTAGE BEFORE ORDERING.
 - PROVIDE NEW 30A 3 PHASE FUSED DISCONNECT IN A NEMA 1 ENCLOSURE.
 - PROVIDE NEW 120/240V 3 PHASE LOAD CENTER, SIEMENS MAIN LUG LOADCENTER MODEL S1224L3125 OR EQUIVALENT, IN A NEMA 1 ENCLOSURE. SEE PANEL SCHEDULE.



ONE LINE DIAGRAM
 N.T.S.



2 UV POWER PLAN
 SCALE: 1/2" = 1'

PANEL P															
Mains: 125 A MLO															
Voltage: 240/120V, 3 PHASE															
LOCATION: VAULT.															
MINIMUM AIC															
CKT NO.	LOAD DESCRIPTION	BREAKER	POLE NO.	LOAD -VA			LOAD -VA			LOAD DESCRIPTION	CKT NO.				
				A	B	C	A	B	C						
1	HEATER	20	2	1500			720			1	15	DEHUMIDIFIER	2		
3					1500				1920	1	20	EXTERIOR RECEPTACLE	4		
5	LIGHTS AND FAN	15	1			160			1920	1	20	UV SYSTEM RECEPTACLE	6		
7							1440			1	15	SPARE	8		
				1500	1500	160	2160	1920	1920						
				TOTAL PHASE A : 3660				TOTAL PHASE B : 3420				TOTAL PHASE C : 2080			
				TOTAL CONNECT LOAD (VA) : 9160				TOTAL DEMAND LOAD (VA) : 9160				TOTAL DEMAND AMPS : 25.5			
				TOTAL AMPS : 25.5											

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