

ADDENDUM No. 1

DATE: November 22, 2024

PROJECT: Village of Algonquin
Braewood Pump Station Rehabilitation

TAI PROJECT NUMBER: ALG-037

OWNER: Village of Algonquin

ENGINEER: Trotter and Associates, Inc.
40W201 Wasco Road, Suite D
St. Charles, Illinois 60175

TO: Prospective Bidders

The Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated November 1st, 2024, with amendments and additions noted below.

Acknowledge receipt of this Addendum in the space provided on the Proposal Form. Failure to do so may disqualify the Bidder.

This Addendum consists of six (5) pages, plus attachments consisting of sixteen (17) pages.

General Comments

1. The bid opening date has been extended to **December 10, 2024 at 10:00 am** at the William J. Ganek Municipal Center, 2200 Harnish Drive, Algonquin, Illinois 60102.
2. A Non-Mandatory Pre-Bid Conference was held at 1:00 PM on November 18, 2024 at the Village of Algonquin Public Works Facility. The sign-in sheet and minutes of the Pre-Bid Conference can be found as separate documents, enclosed separately, and shall be considered part of Addendum No. 1.

Modifications to Project Specifications

1. Table of Contents

Modify the Table of Contents as follows:

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS	
00 01 15	LIST OF DRAWING SHEETS
00 11 13	ADVERTISEMENT FOR BIDS
00 11 13.01	NEWSPAPER ADVERTISEMENT

2. Section 00 11 13 – Notice to Bidders

Modify Section 00 11 13, 1.1 A as indicated

- A. Notice is hereby given that the Village of Algonquin, Illinois, will receive sealed bids at the William J. Ganek Municipal Center, 2200 Harnish Drive, Algonquin, Illinois 60102 until ~~December 4, 2024~~ **December 10, 2024 (ADD1)**, at 10:00 a.m. CST for the Braewood Pump Station Rehabilitation project at which time the bids will be publicly opened and read. Bid proposals for this project will be considered not only on the basis of cost, but also on past performance, experience and ability to perform the work. The Village of Algonquin reserves the right to accept the bid deemed to be in its own best interest, which is based on all of the above considerations. Bid will be awarded to the lowest responsible bidder determined in the exclusive discretion of the Village Board of Trustees.

3. Section 26 29 23 – Variable Frequency Motor Controllers

Replace Section 26 29 23, 1.1 Summary, A with the following

- B. This section is for the replacement of the existing variable frequency motor controllers installed in the existing Motor Control Center (MCC) (ADD1).**

26 29 23, 2.1 Manufacturers, A as indicated:

- A. Subject to compliance with the Contract Documents, the following manufacturers are acceptable:
- ~~Allen-Bradley by Rockwell Automation, Inc.~~ **ABB Group (ADD1)**

Modify Section 26 29 23, 2.2 General, A as indicated:

- A. VFDs shall be ~~Allen-Bradley Variable Frequency AC Drive~~ **ABB ACQ (ADD1)** provided with the following features:

4. Section 26 24 19 – Motor Control Centers

Modify Section 26 29 23, 1.1 Summary, A as indicated

- A. This section includes the requirements for the modification of the existing Allen-Bradley® CENTERLINE® Motor Control Center (MCC) ~~at Woods Creek Pump Station~~ **Braewood Pump Station (ADD1).**

Modify Section 26 29 23, 2.3 C. as indicated

C. Variable Frequency Drives:

1. Variable frequency drives shall be ~~Allen Bradley PowerFlex 755T~~ drives **supplied (ADD1)** with harmonic mitigation and ethernet card for communication to station PLC (SCADA).
 - a. Refer to section 26 29 23 for variable frequency drive requirements.

Modifications to Project Drawings

1. Sheet D.1 – Site Demolition Plan

- A. Additional fence removal and reinstallation added.
- B. Existing site piping revised and pavement removal and curb and gutter removal/replacement limits expanded.
- C. Existing grounding wire shown around existing building.
- D. Existing odor control piping shown and removal limits expanded.

2. Sheet D.2 – Upper and Lower Demolition Plan

- A. Slab details replaced.
- B. Existing odor control piping removal limits expanded.
- C. Existing concrete pad added beneath existing MCC.
- D. Key Note #2 added.

3. Sheet D.4 –Demolition Section

- A. Existing odor control piping removal limits expanded.

4. Sheet D.5 – Electrical Single-Line and MCC Elevation Demolition

- A. MCC sections 5, 6 and 7 to be removed.
- B. Buckets associated with Pump 1 to be removed in Section 3.
- C. Various changes for consistency/clarity

5. Sheet C.1 – Site Plan

- A. Replaced in its entirety.

6. Sheet C.2 – Details

- A. Detail “Typical Hot Mix Asphalt Pavement” deleted.

7. Sheet S.1 – Upper Level Structural Plan and Details

- A. Sections 2, 3 and 4 added.
- B. Photo 1 added.
- C. Pad detail replaced.

8. Sheet M.1 – Control Room HVAC Plan

- A. Location of proposed fans switch moved.

9. Sheet P.1 – Upper and Lower Level Process Plan

- A. Proposed odor control piping installation limits expanded.
- B. Note to install analog pressure gauges on pump discharge piping added.

10. Sheet P.2 – Process Sections

- A. Equipment concrete pads shown under proposed pump and base elbows.
- B. Key note #8 removed.

11. Sheet P.3 – Process Section

- A. Proposed odor control piping installation limits expanded.

12. Sheet E.2 – Upper and Lower Electrical Plan

- A. Replaced in its entirety.

13. Sheet E.3 – Electrical Single Line and MCC Elevation

- A. MCC single-line updated.
- B. Freestanding VFD/bypass packages added (in lieu of new MCC structures shown in bid set)
- C. Various markups for consistency/clarity.
- D. New panel LP-B now integrated into MCC.

Questions & Clarifications

1. Drawing C.2 provides details for the “Typical Hot-Mix Asphalt Pavement” and “HMA Driveway with 6” Aggregate Base.” Which detail should be used for repairing the area where the existing valve vault is to be removed?

Response: Please use “HMA Driveway with 6” Aggregate Base” detail. Revisions to sheet C.2 (enclosed) include deletion of the second pavement detail.

2. Should the cost to repair the asphalt at the “Designated Contractor Laydown Area” be included in the proposal?

Response: Contractor to restore the site to its original condition. Sheet C.1 has been revised to include limits to which the Contractor must keep their work within to minimize the area of restoration.

3. Drawing C.1 indicates a fence and double gate are to be installed over an existing concrete slab. Could you confirm if the existing concrete slab should be removed to construct the foundation for the gate and fence as detailed in Drawing C.2?

Response: The existing concrete slab is to remain. As-built drawings indicate that the original 8” slab, reinforced with #5’s at 12” oc in the bottom of the slab, was cored for post installation and the posts grouted in place. Contractor shall attempt to twist out the existing posts adjacent to the existing gate using a pipe wrench. If unsuccessful, cut off the existing posts as close as possible to the slab without damaging adjacent structure. Core out or grind down the existing fence posts from the slab but do not go deeper than 5” into the slab. Patch the holes using non-shrink grout. New fence posts should be installed by coring holes slightly larger than the posts, not to exceed a depth of 5”, and using epoxy adhesive to secure the posts into the slab. Posts diameter as recommended by gate manufacturer.

4. Can the vertical end suction centrifugal pumps and their respective VFDs be substituted with others of equal or similar characteristics, aside from the specified manufacturers and models?

Response: No, Contractor to provide pumps and VFDs as specified.

5. Division 00 11 13.01 Newspaper Advertisement is listed in the Table of Contents, but not included within the Bid Specification. Can we assume no newspaper advertisement is required?

Response: Per the above Modifications to Specifications section, the Table of Contents is hereby modified and Section 00 11 13.01 Newspaper Advertisement is removed from the bid specifications.

THIS ADDENDUM IS HEREBY MADE PART OF THE CONTRACT DOCUMENTS AND SHALL BE NOTED ON THE PROPOSAL.

Attachments:

Pre-Bid Conference Meeting Minutes	3 Pages
Pre-Bid Conference / Site Visit Sign-In Sheet	1 Pages
Revised Sheets	13 Pages

END ADDENDUM NO. 1

Village of Algonquin
Braewood Pump Station Rehabilitation

Pre-Bid Conference

1:00 PM – Monday, November 18, 2024
110 Mitchard Way – Algonquin Public Works Facility

Minutes

A meeting was held on Monday, November 18th, 2024 at 1:00pm at the Village of Algonquin Public Works Building located at 110 Mitchard Way, Algonquin, IL. Attendees are documented on the enclosed sign-in sheet.

Introductions

Cliff Ganek, P.E.	Village of Algonquin	Village Engineer
Jason Schutz	Village of Algonquin	Utilities Superintendent
Tom Hall	Village of Algonquin	Chief Wastewater Operator
Jake Benner	Village of Algonquin	Engineer
Jillian Kiss, P.E.	Trotter and Associates, Inc.	Project Manager
Dan Gillespie, P.E.	Trotter and Associates, Inc.	Construction Manager

Receipt of Bids

The Village Clerk of the Village of Algonquin, 2200 Harnish Road, Algonquin Illinois, 60102; will receive sealed bids until 10:00 am on December 4, 2024. Bids will be opened and read immediately following the bid deadline.

Bid Security

Each bid shall be accompanied by a bid bond, bank draft, cashier's check or certified check payable to the order of the Village of Algonquin, in an amount not less than five (5) percent of the amount of the bid, as a guaranty that the bidder will execute the contract, if it is awarded, in conformity with the bid form.

The successful bidder will be required to furnish Performance and Completion and Payment Bonds, each in an amount equal to 100 percent of the contract sum.

The successful bidder will also be required to furnish a Maintenance Bond in the amount of five (5) percent of the contract sum. The bond shall be held by the Owner for a period of one year from the date of final acceptance.

Bidder Certification

Bidders must complete all of the certifications within the Notice to Bidders and bidding documents. To demonstrate qualifications to perform the WORK, each BIDDER must be prepared to submit within five days of OWNER'S request written evidence of the types set forth in the Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Each BID must contain evidence of BIDDER'S qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.

Owner intends to award the contract only to a Bidder that furnishes satisfactory evidence that it has the requisite experience, ability, capital, facilities, organization and staffing to enable it to perform the work in a satisfactory manner and to complete the work for the contract price and within the contract time.

Contract Time

The Work will commence expeditiously after the Commencement Date. The Contractor shall substantially complete the Work in 320 calendar days, and all Work including punch list items within 350 calendar days unless an extension of time is granted in accordance with the specifications.

Wage Provisions

This contract calls for the construction of a “public works,” within the meaning of the Illinois Prevailing Wage Act, 821 ILCS 130/.01 et seq. (“the Act”). The Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than current “prevailing rate of wages” (hourly cash wages plus amount for fringe benefits) in the county where the work is performed.

Project Summary

The proposed improvements consist primarily of the following:

- A. Replacement of (3) existing raw sewage pumps and variable frequency drives;
- B. Replacement of existing in-channel grinder equipment;
- C. Replacement of interior and exterior lift station piping, valves and flow meter;
- D. Replacement of existing odor control equipment and air supply piping revisions;
- E. Relocation of existing backflow preventer and water meter;
- F. Removal and replacement of concrete slab with access hatch above grinder equipment;
- G. Bypass pumping;
- H. HVAC upgrades and electrical upgrades; and
- I. Restoration including HMA pavement, PCC curb, and landscape restoration.

Discussion Items

- A. CCDD - There is expected to minimal excavation required for the proposed work. All testing and reporting for CCDD disposal is the responsibility of the contractor.
- B. *Question from Attendee regarding work hours. Response: Work hours are 7am-7pm. The Village noted that the pump station is bordered by homes and the Contractor is expected to be courteous of the Village’s neighbors.*
- C. *TAI noted that the plans and specifications will be revised to reflect a change in the specified VFD manufacturer. The design intent is to install all three VFDs with the existing MCC footprint. The revised electrical plan will show removal of existing MCC sections and installation of wall mounted VFDs in their place. These revisions will be distributed with Addendum No. 1.*

Addendum No. 1

Addendum No. 1 will include, at a minimum, the following items:

- Copy of Pre-Bid Meeting Minutes & Sign-in Sheet
- Bidder Questions to date
- Plan and Specification Revisions to date

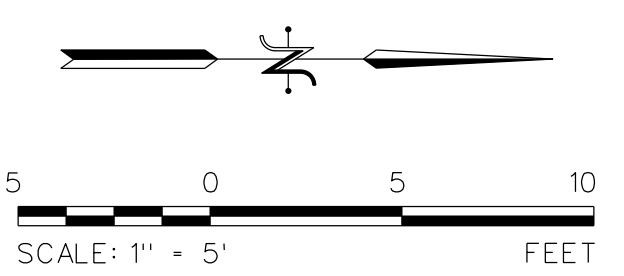
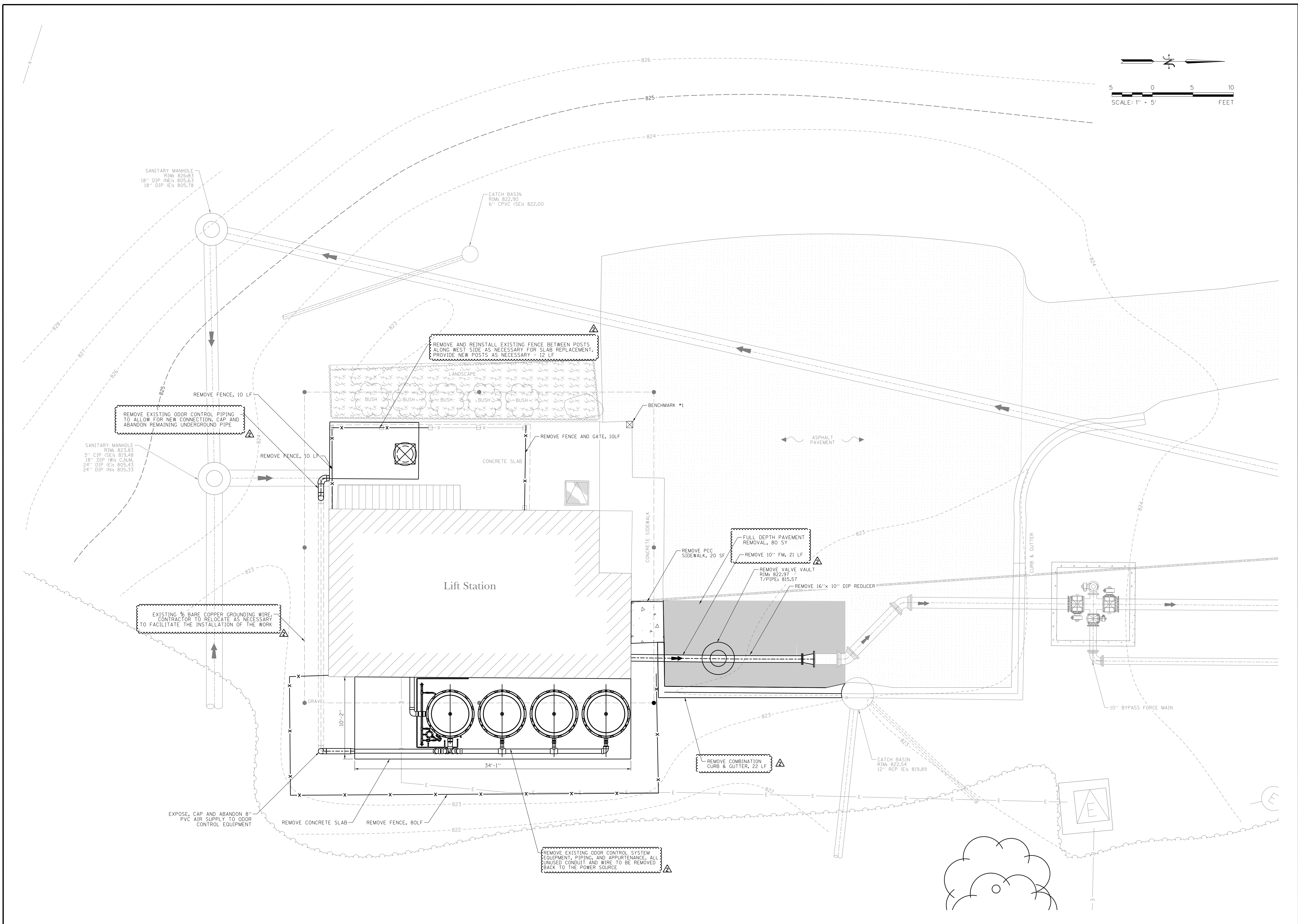
Optional Lift Station Site Visit: 1001 Gaslight Dr, Algonquin, IL 60102

This is Trotter and Associates, Inc. (TAI) understanding of the conversations. Please advise TAI in writing of any misunderstandings. If no response is received within seven calendar days of the date of distribution these minutes are assumed true and correct.

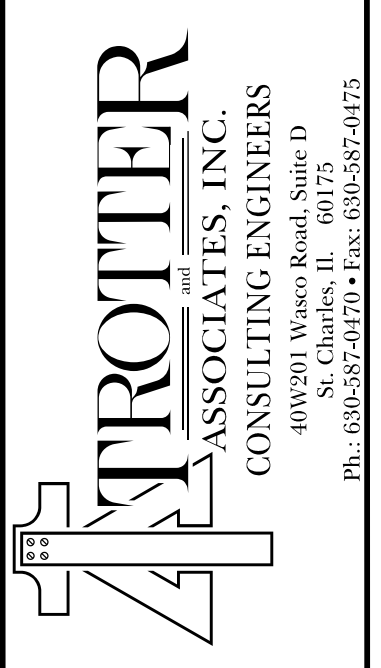
**Village of Algonquin
Braewood Pump Station Rehabilitation**

Pre-Bid Conference
1:00 PM – Monday, November 18, 2024
Sign-in Sheet

Name	Company	Telephone	Email
Jake Benner	VOA		jacobbenner@algonquin.org
Zach Ruemelin	DMI	847-561-0419	zruemelin@dmi-inc.net
Tim Smith	Tri-R Systems	815-787-0830	tsmith@tri-rsystems.com
Tom Hall	VOA	847-561-6953	thall@algonquin.org
Jason Schutz	VOA	847-658-2754	jasonschutz@algonquin.org
John Rowley	Xylem	312-909-4327	John.rowley@xylem.com
Kevin Aronson	Manusos		
Dan Gillespie	TAI	847-346-2338	d.gillespie@trotter-inc.com
Juan Lopez	Foundation Mechanics		juan@foundationmech.com
Jeff Griffard	ID	708-606-6942	jeff@integrateddemolition.com
Jillian Kiss	TAI	847-587-0470	j.kiss@trotter-inc.com

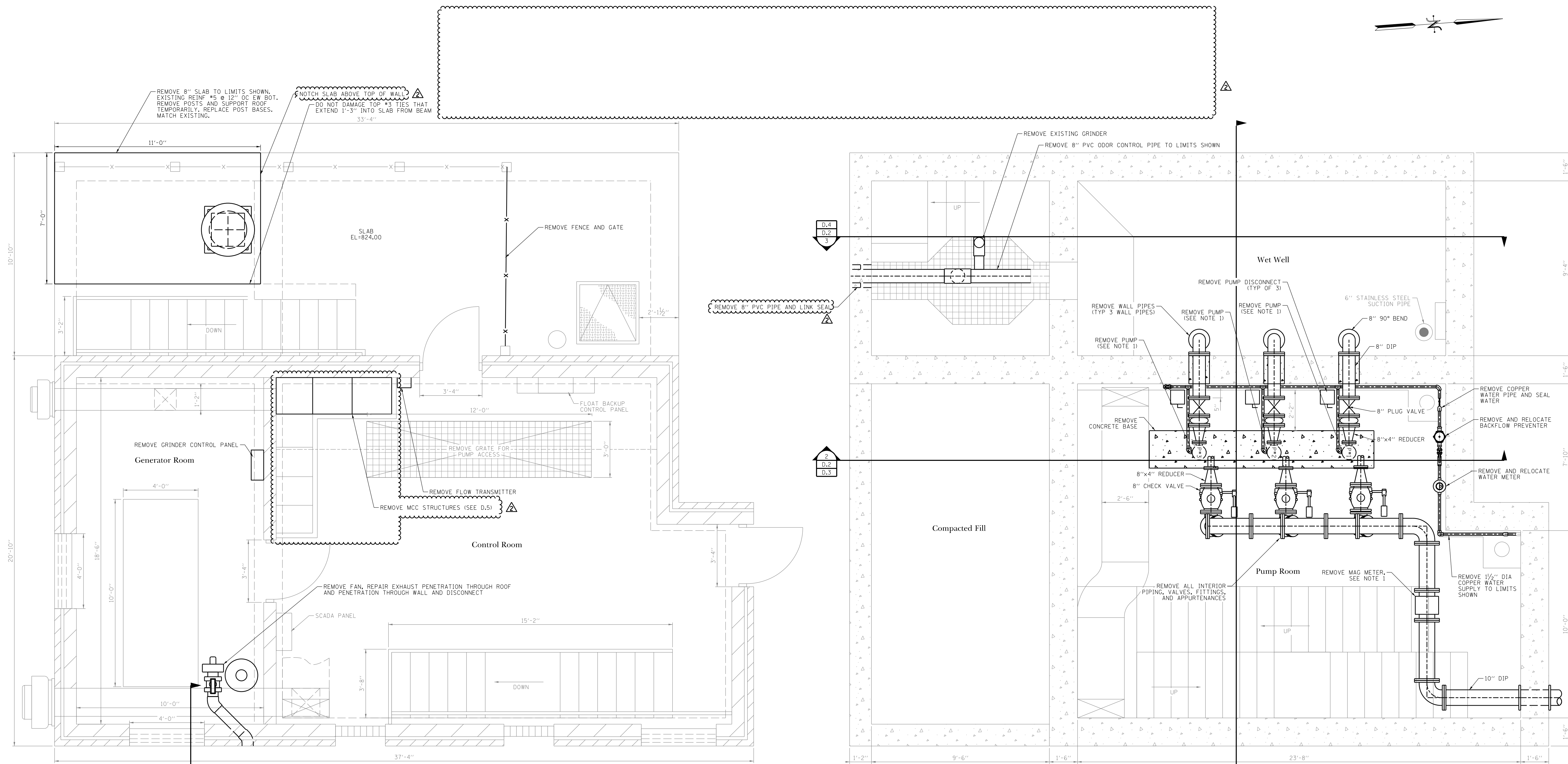


PROJECT STAFF	
ENGINEER	JILLIAN KIM FEE
INSPECTOR	DAVID BROWN/MSA
PROJECT MANAGER	JENNIFER ZARRO, P.E.
DESIGNER	ASHLEY DAVIS
REVISIONS	
DATE	



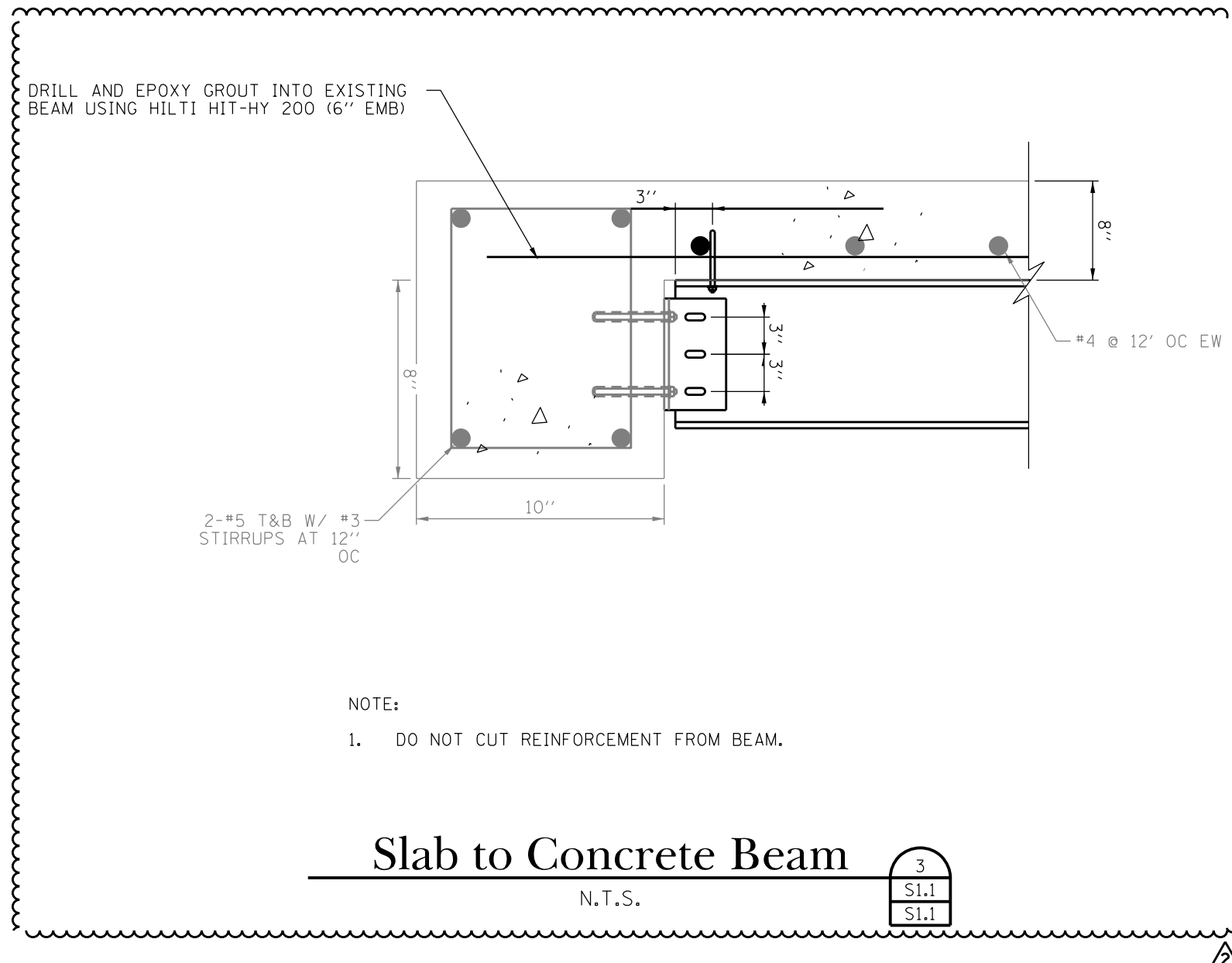
Braewood Pump Station Rehabilitation
Site Demolition Plan
 Algonquin, Kane County, Illinois

Project No.: ALG037
 Plot Date: 11/22/2024
 Scale: 1" = 5'
 Sheet Number
D.1

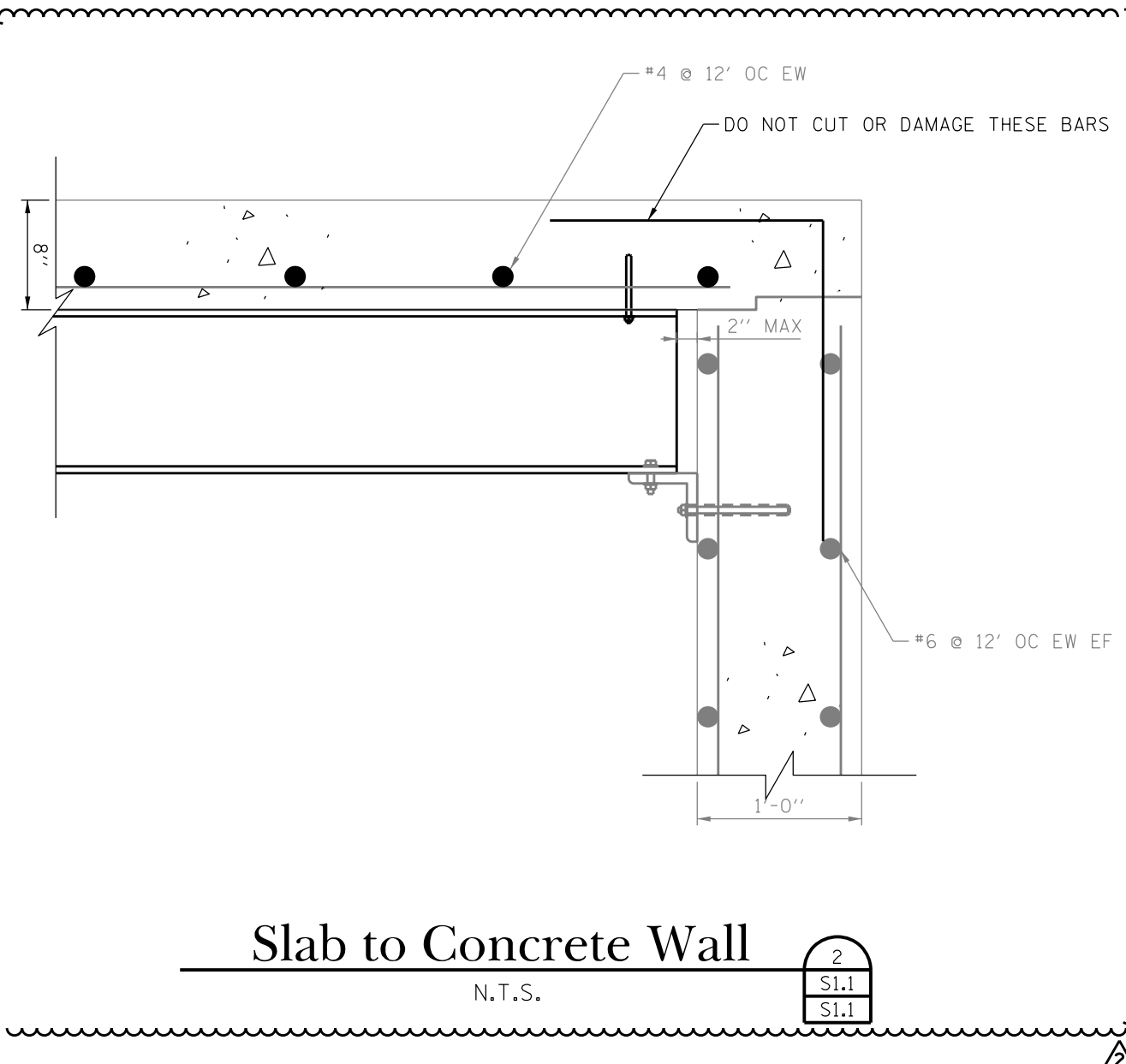


Upper Level Pump Station Demolition Plan
SCALE: 3/8" = 1'-0"

Lower Level Pump Station Demolition Plan
SCALE: 3/8" = 1'-0"



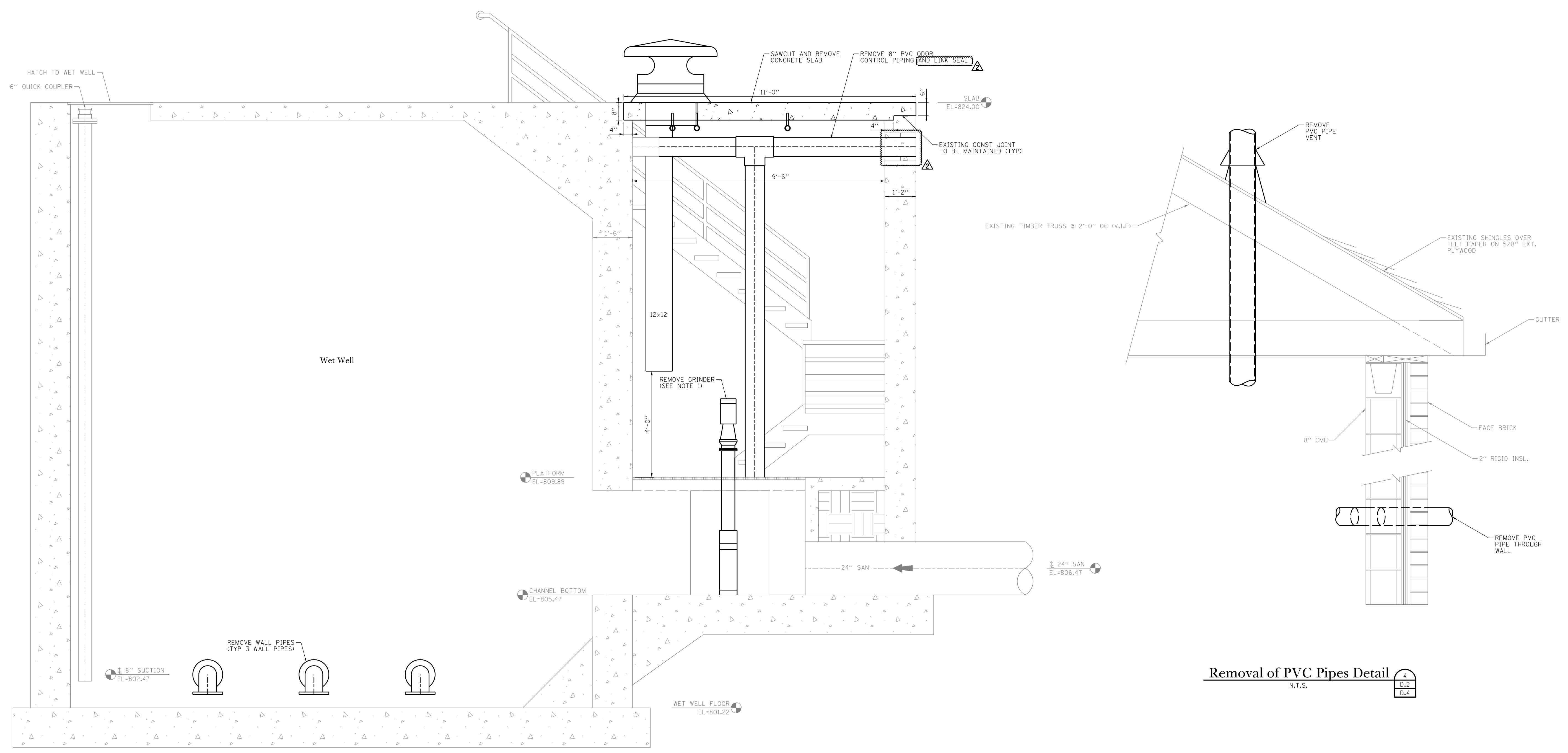
Slab to Concrete Beam
N.T.S.



Slab to Concrete Wall
N.T.S.

- NOTE:
1. THE MAG METER AND ALL PUMP EQUIPMENT REMOVED SHALL BE SALVAGED, SECURED ON PALLETS, AND DELIVERED TO ALGONQUIN WWTP (125 WILBRANDT DRIVE).
 2. ALL UNUSED CONDUIT AND WIRE TO BE REMOVED BACK TO THE POWER SOURCE. REPAIR ALL UNUSED OPENINGS.

PROJECT STAFF	ISSUE	REVISIONS	DATE
ENGINEER: ILLIANA R. FLE DESIGNER: JESSICA B. WALKER PROJECT MANAGER: JESSICA B. WALKER TECHNICAL: MARIANNA J. BROWN DRAWN BY: JESSICA B. WALKER	2, 1		11/22/24 11/24/24
 40501 Weber Road, Suite D St. Charles, IL 60175 Ph: 630.587.4700 • Fax: 630.587.4715			
Braewood Pump Station Rehabilitation Upper and Lower Level Demolition Plan Algonquin, Kane County, Illinois			
Project No.:	ALG037		
Plot Date:	11/22/2024		
Scale:	3/8" = 1'-0"		
Sheet Number			
D.2			

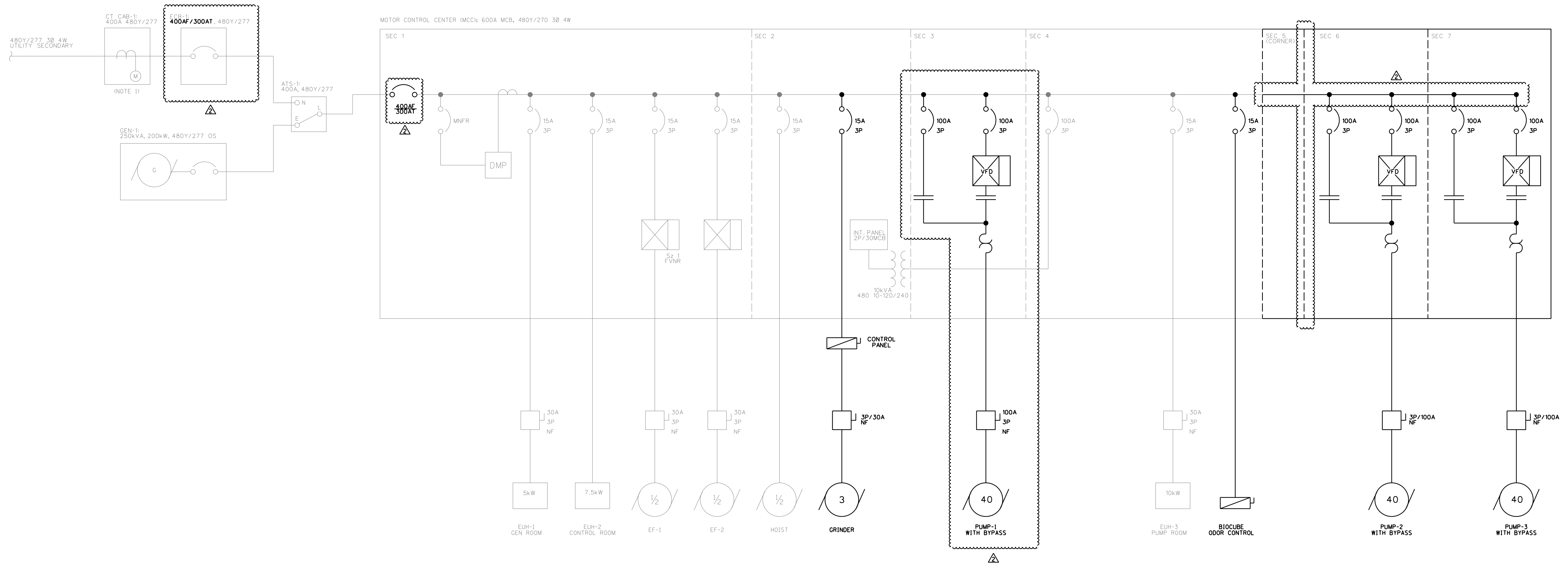


Demolition Section 3
D.2
D.4
SCALE: 1/2" = 1'-0"

Removal of PVC Pipes Detail 4
D.2
D.4
N.T.S.

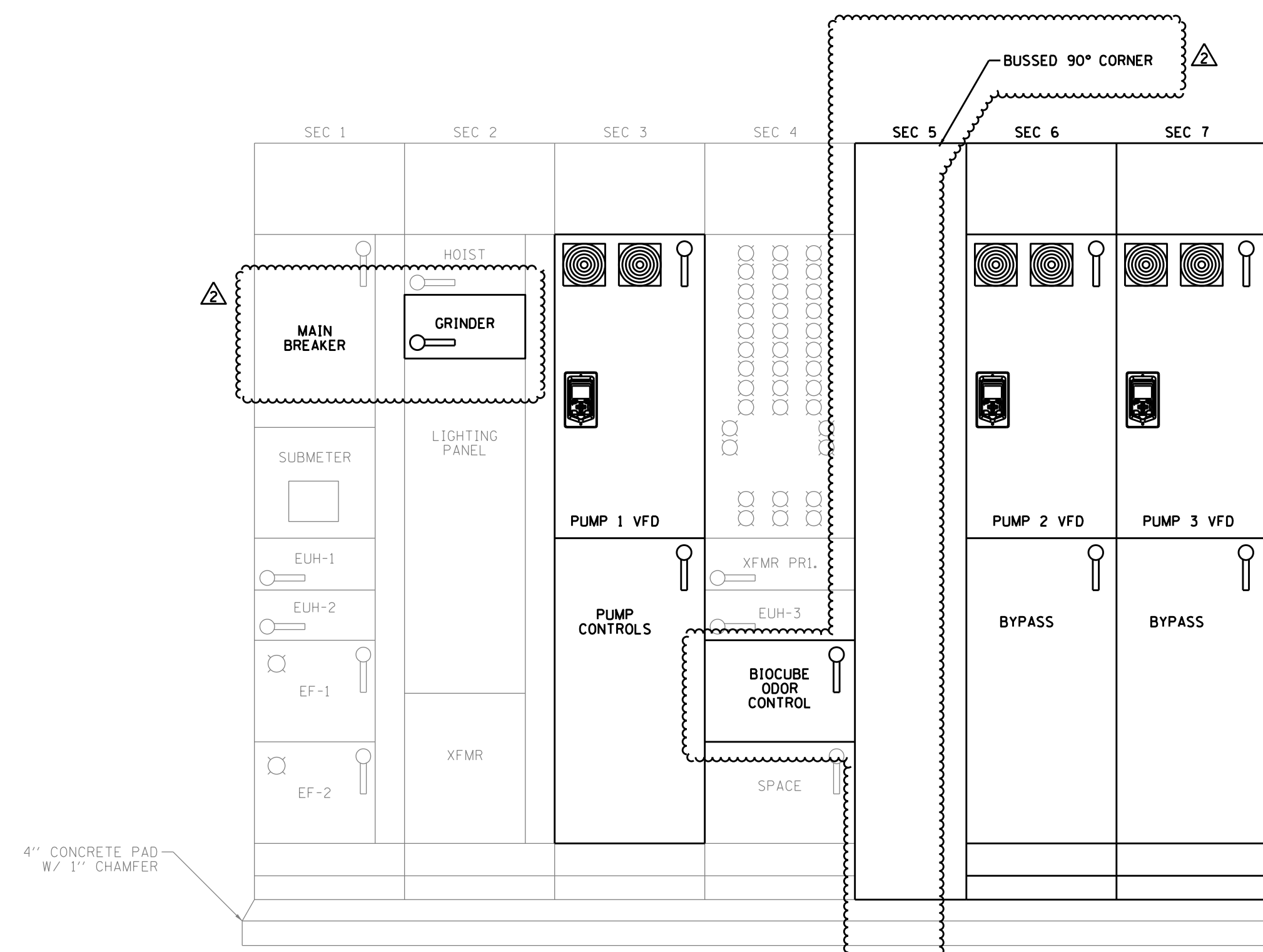
NOTE:
DEMOLITION OF COMMUNITOR INCLUDES REMOVAL OF ANCHOR BARS, BOLTS AND RESTRAINTS THAT CONNECT COMMUNITOR TO CHANNEL WALLS AND FLOOR. ADDITIONALLY, CHIP OUT ANY GROUT THAT WAS USED FOR LEVELING SUCH THAT THE CHANNEL WALL/FLOOR IS READY FOR INSTALLATION OF A NEW COMMUNITOR.

	DATE	11/22/24	11/22/24		
	REVISIONS				
	ISSUE	2.	1.		
PROJECT STAFF		ENGINEER: ILLIANA R. FLE ARCHITECT: JENNIFER M. GALE PROJECT MANAGER: JENNIFER M. GALE DESIGNER: JENNIFER M. GALE CHECKER: JENNIFER M. GALE DRAWN BY: JENNIFER M. GALE			
 TROTTER ASSOCIATES, INC. CONSULTING ENGINEERS 40500 Weber Road, Suite D St. Charles, IL 60175 Ph: 630-587-0700 • Fax: 630-587-0715					
Braewood Pump Station Rehabilitation Demolition Section Algonquin, Kane County, Illinois					
Project No.:		ALG037			
Plot Date:		11/22/2024			
Scale:		1/2" = 1'-0"			
Sheet Number		D.4			
		ADDENDUM #1 ISSUED FOR BIDDING			



Electrical Demolition: One-Line Diagram

N.T.S.



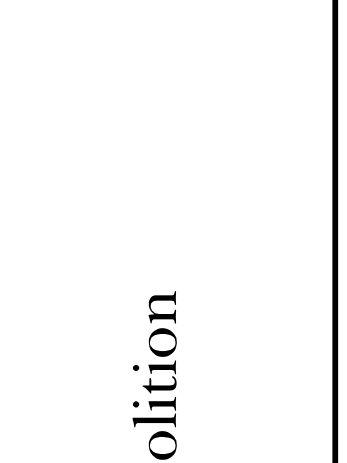
Electrical Demolition: MCC-1 Elevation

N.T.S.

GENERAL NOTE:
1. COMPONENTS TO BE REMOVED SHOWN IN FULL TONE

DATE	REVISIONS	ISSUE
11/22/24		2.
11/4/24		1.

PROJECT STAFF	
ENGINEER	JILLIAN R. FLE
DESIGNER	JUSTIN B. BARNES
PROJECT MANAGER	JUSTIN ZATKO, P.E.
TECHNICIAN	MICHAEL DUNN
TECHNICIAN	DANIEL BOURN



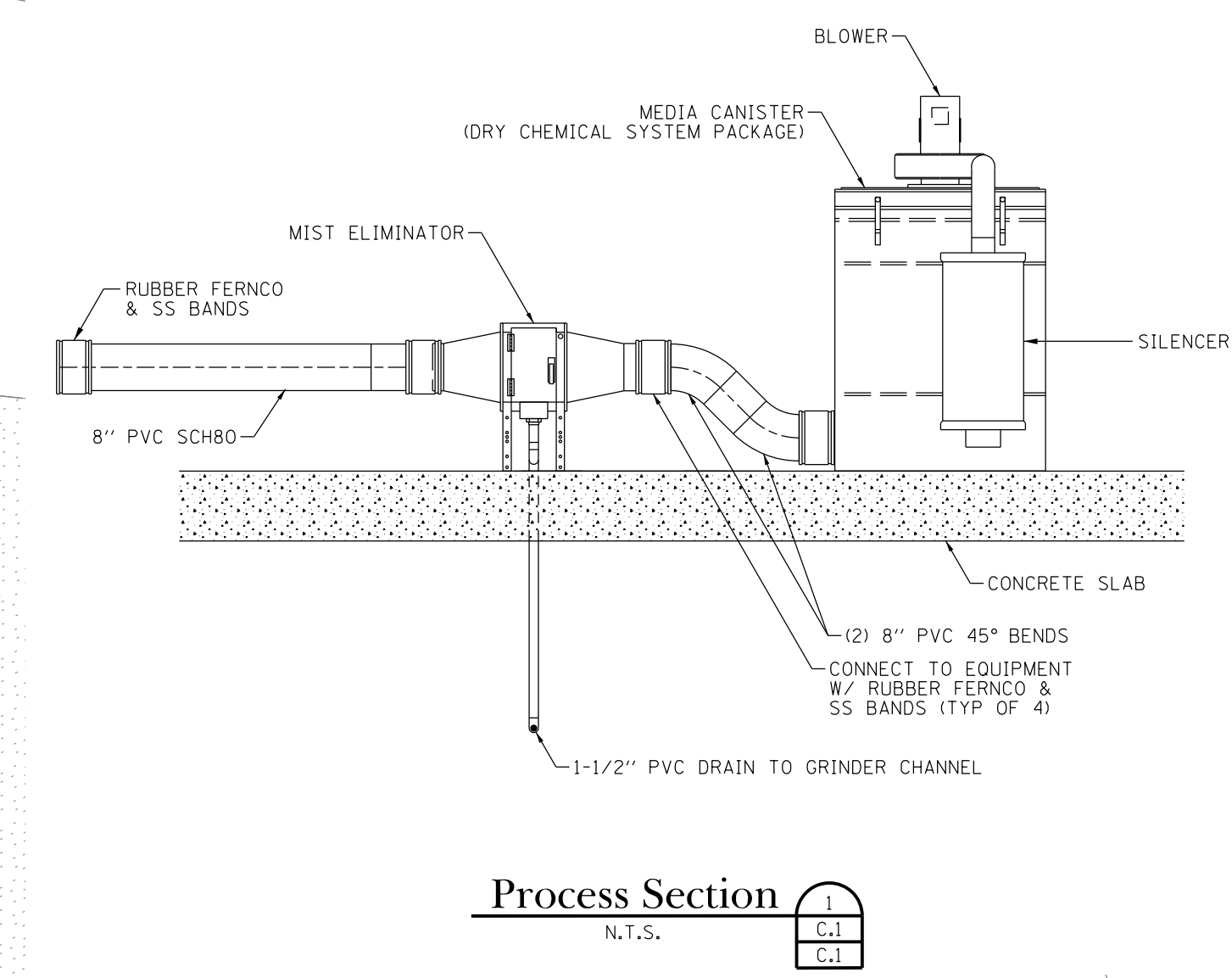
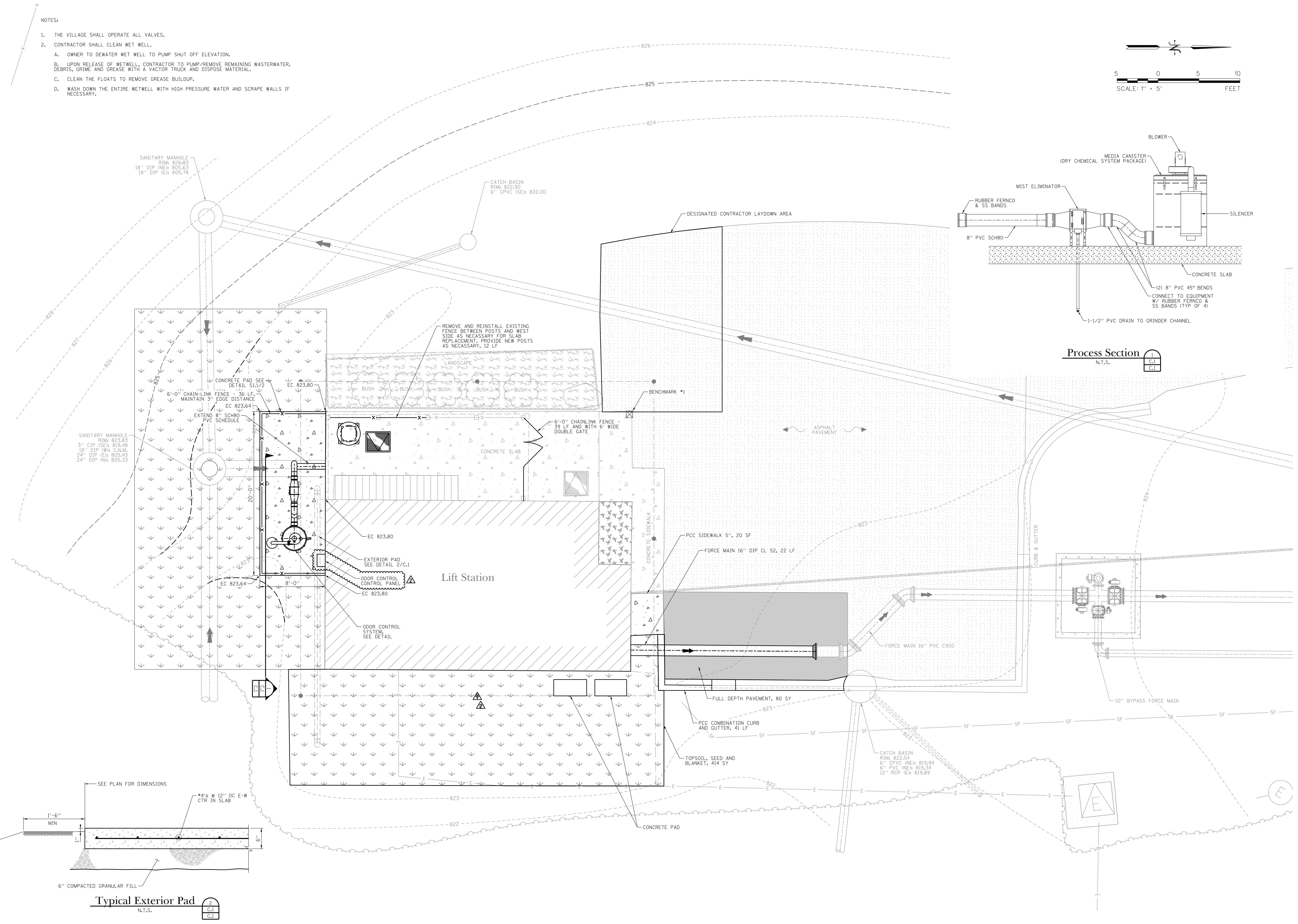
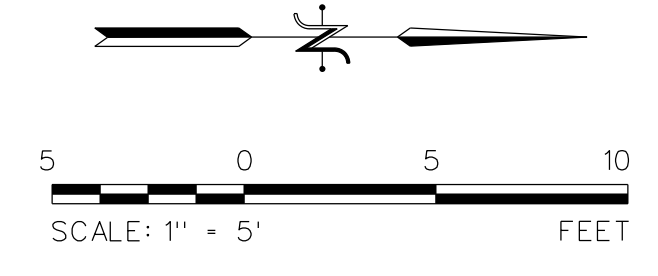
TROTTER ASSOCIATES, INC.
CONSULTING ENGINEERS
40504 Weber Road, Suite D
St. Charles, IL 60175
Ph: 630-587-0700 • Fax: 630-587-0715

Braewood Pump Station Rehabilitation
Electrical Single-Line and MCC Elevation Demolition
Algonquin, Kane County, Illinois

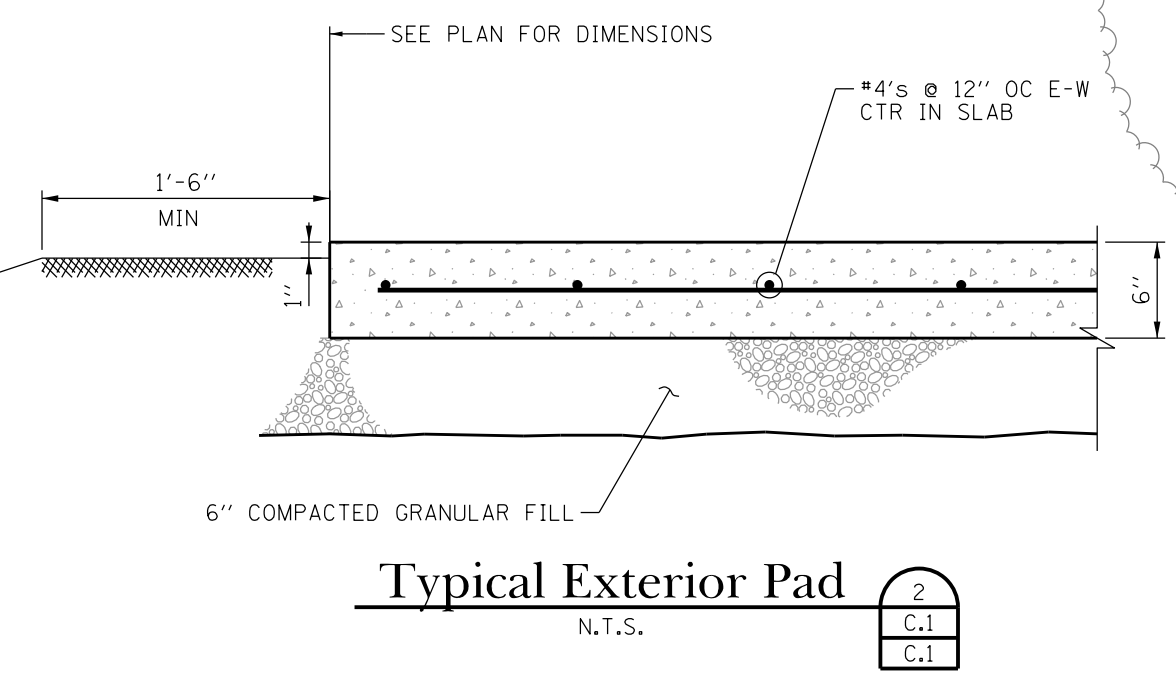
Project No.:	ALG037
Plot Date:	11/22/2024
Scale:	N.T.S.
Sheet Number	D.5

NOTES:

1. THE VILLAGE SHALL OPERATE ALL VALVES.
2. CONTRACTOR SHALL CLEAN WET WELL.
 - A. OWNER TO DEWATER WET WELL TO PUMP SHUT OFF ELEVATION.
 - B. UPON RELEASE OF WETWELL, CONTRACTOR TO PUMP/REMOVE REMAINING WASTEWATER, DEBRIS, GRIME AND GREASE WITH A VACTOR TRUCK AND DISPOSE MATERIAL.
 - C. CLEAN THE FLOATS TO REMOVE GREASE BUILDUP.
 - D. WASH DOWN THE ENTIRE WETWELL WITH HIGH PRESSURE WATER AND SCRAPE WALLS IF NECESSARY.



Process Section
N.T.S.



Typical Exterior Pad
N.T.S.

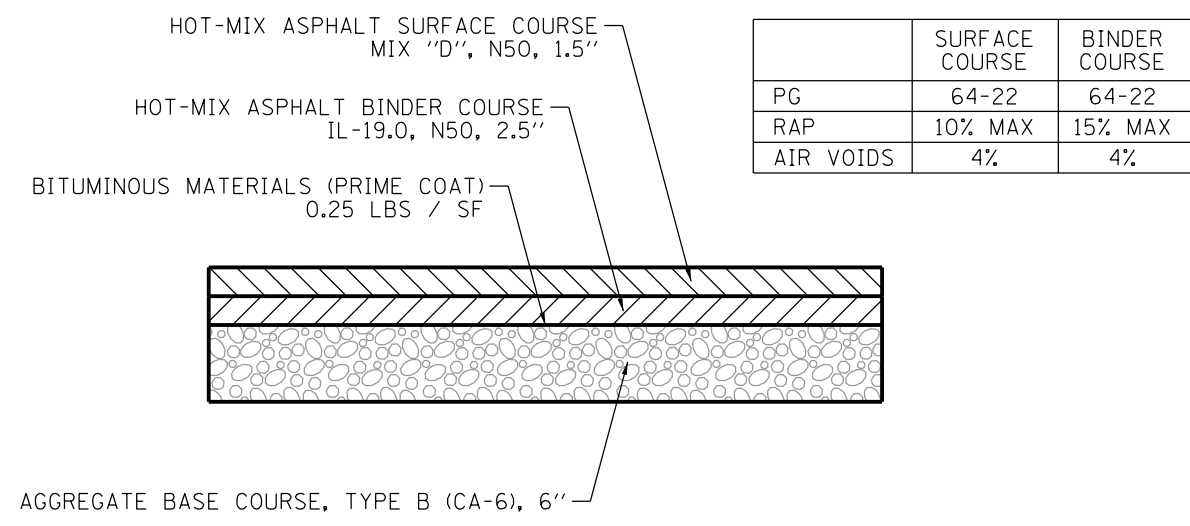
DATE	REVISIONS	ISSUE	PROJECT STAFF
11/22/24		2.	ADDENDUM #1
11/27/24		1.	ISSUED FOR BIDDING

ENGINEER	JILLIAN KIRK FEE
PROJECT MANAGER	DAVID BROWN KRAK
DESIGNER	JAMES ZARRO D.L.T.
PROJECT MANAGER	SHANE DAVISON
PROJECT MANAGER	ROBERT BLOUNT

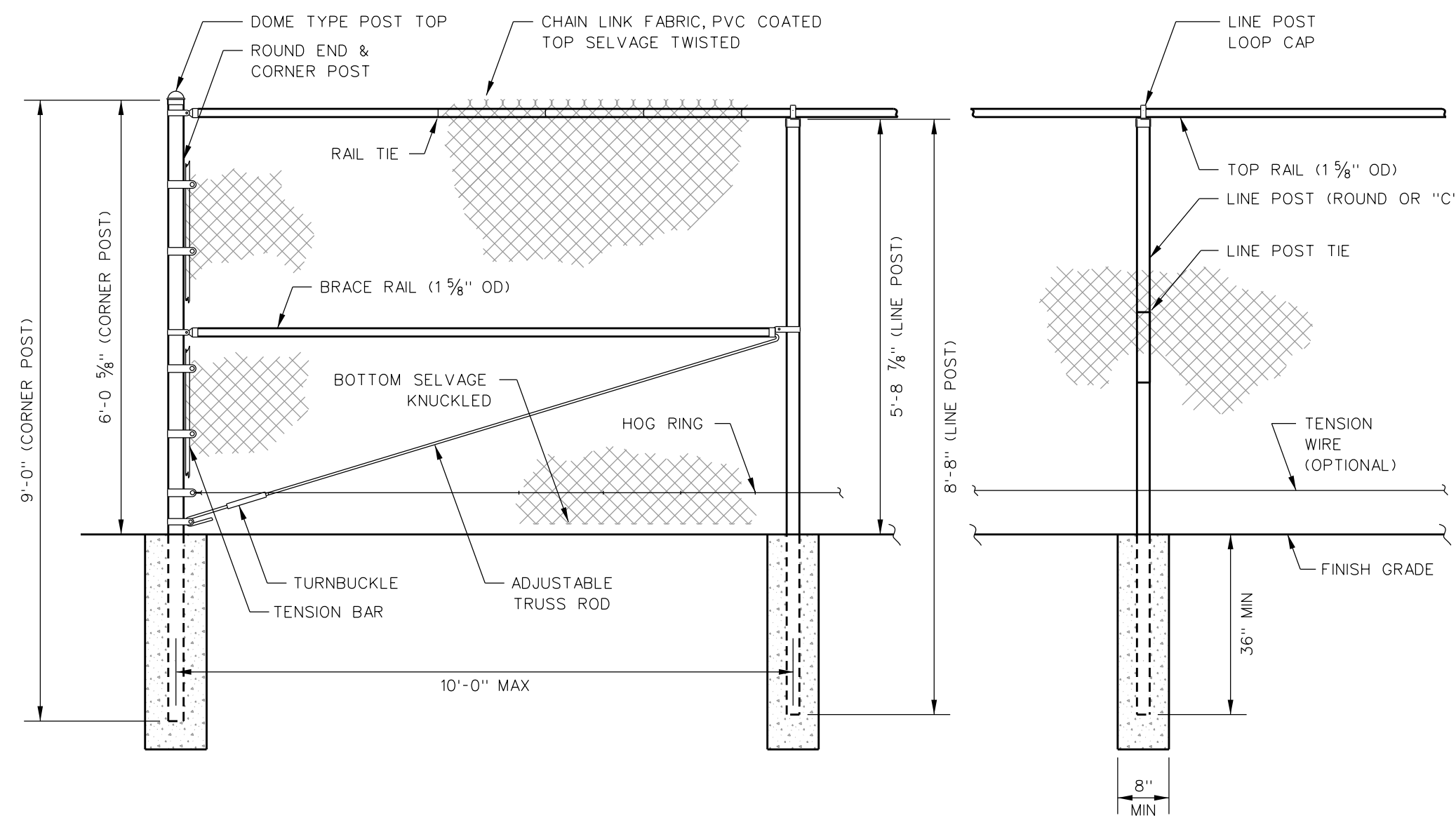
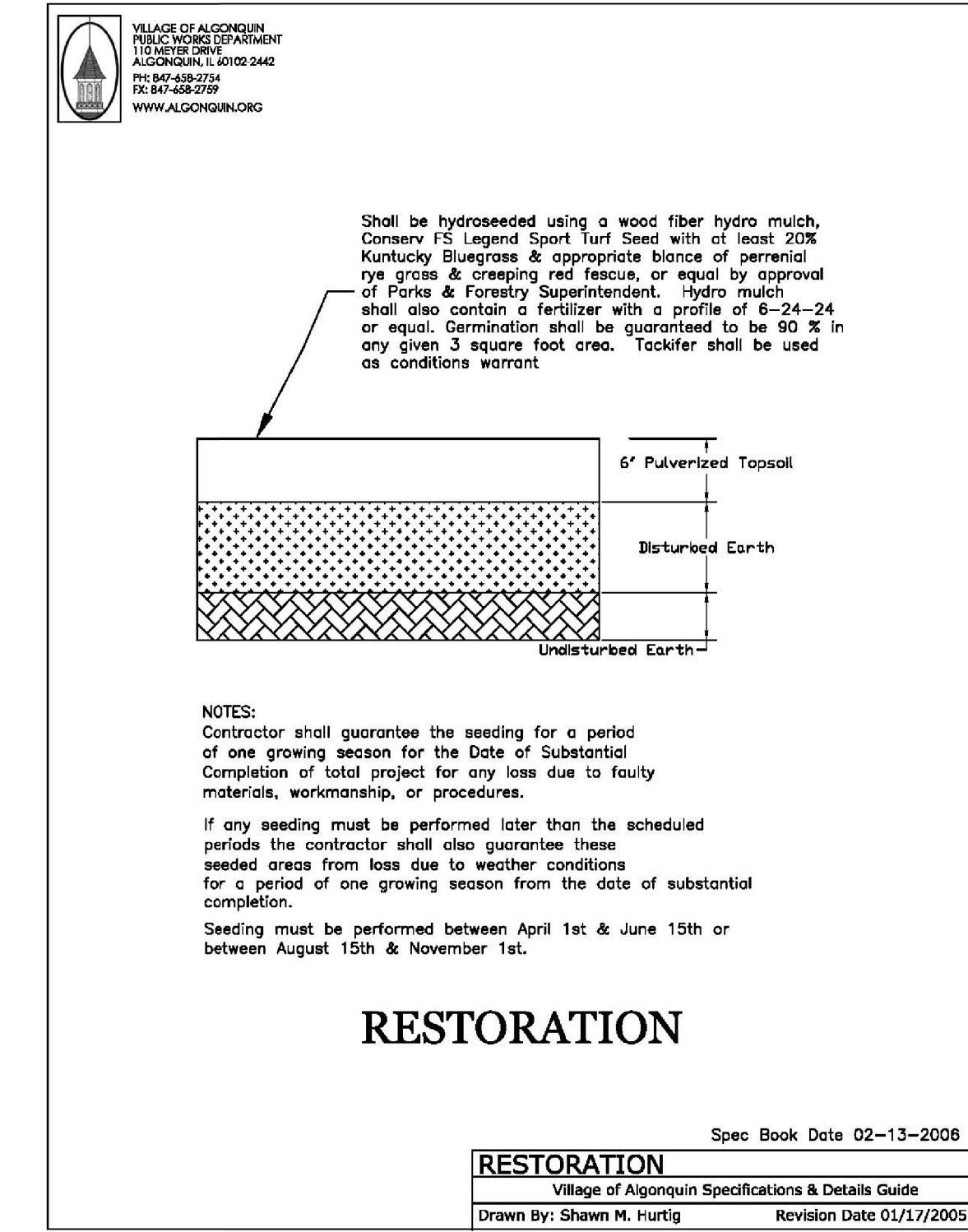
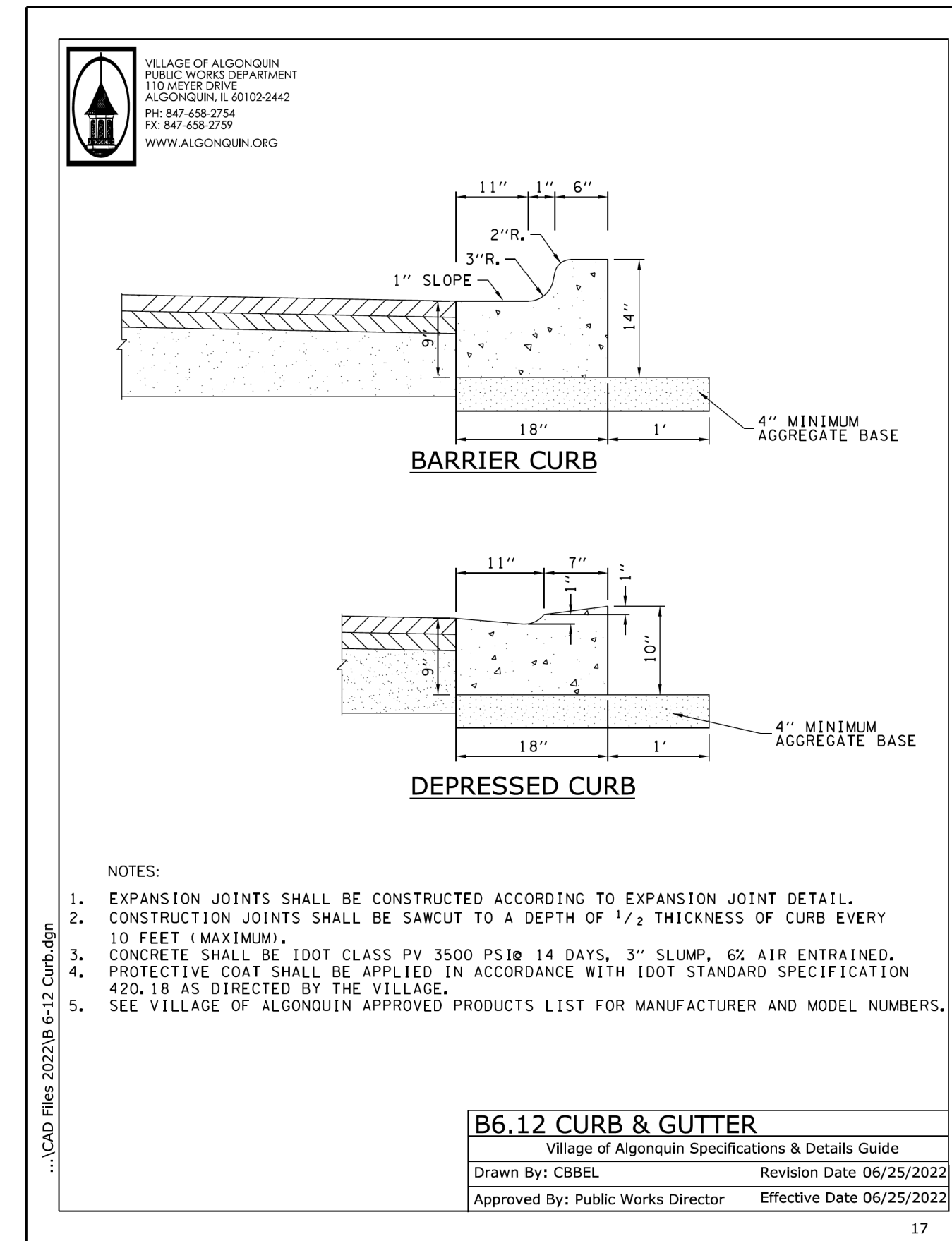
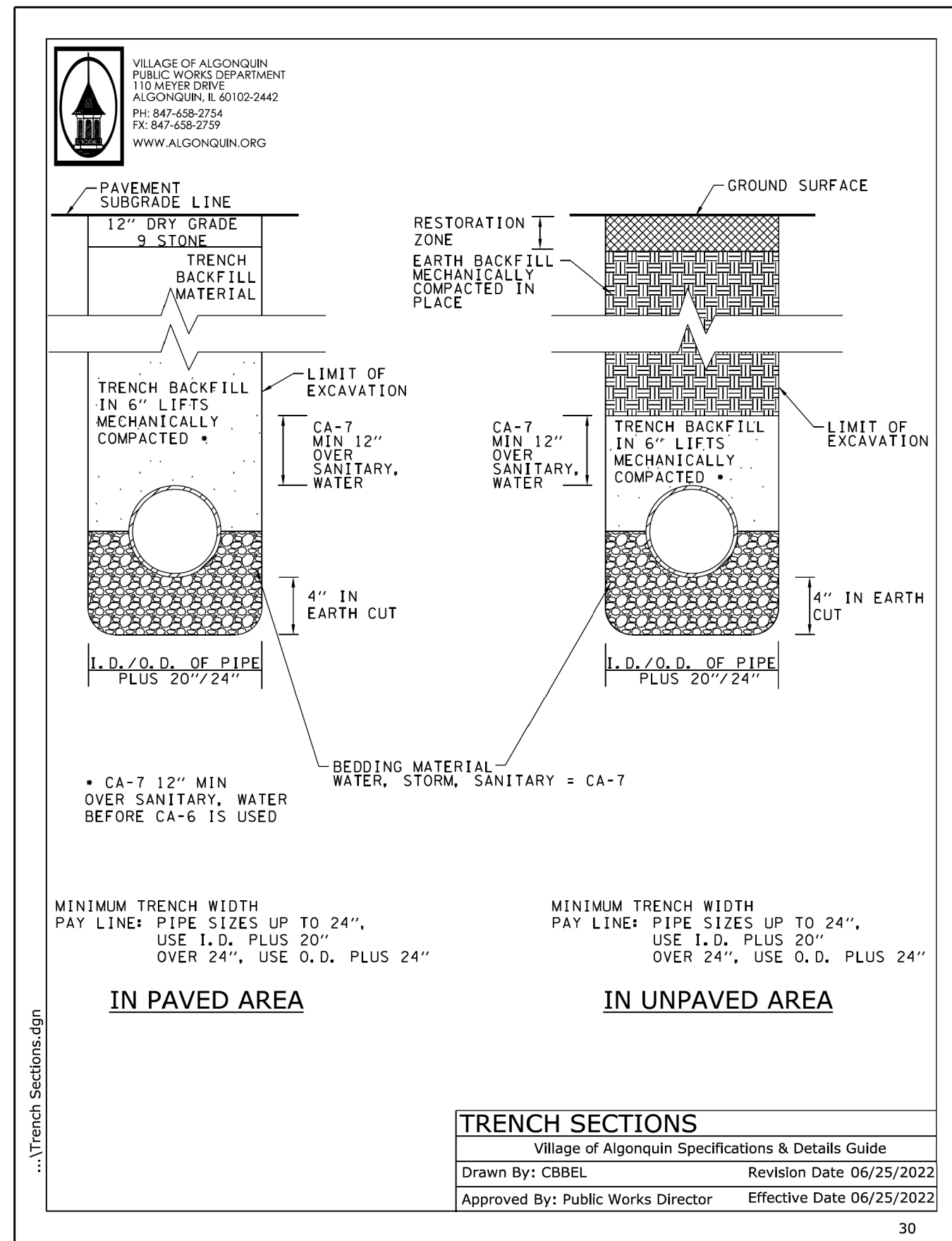
TROTTER
ASSOCIATES, INC.
CONSULTING ENGINEERS
409201 Waco Road, Suite D
St. Charles, IL 60175
PH: 636-587-0707 • FAX: 636-587-0775

Braewood Pump Station Rehabilitation
Site Plan
Algonquin, Kane County, Illinois

Project No.:	ALG037
Plot Date:	11/22/2024
Scale:	1" = 5'
Sheet Number	C.1

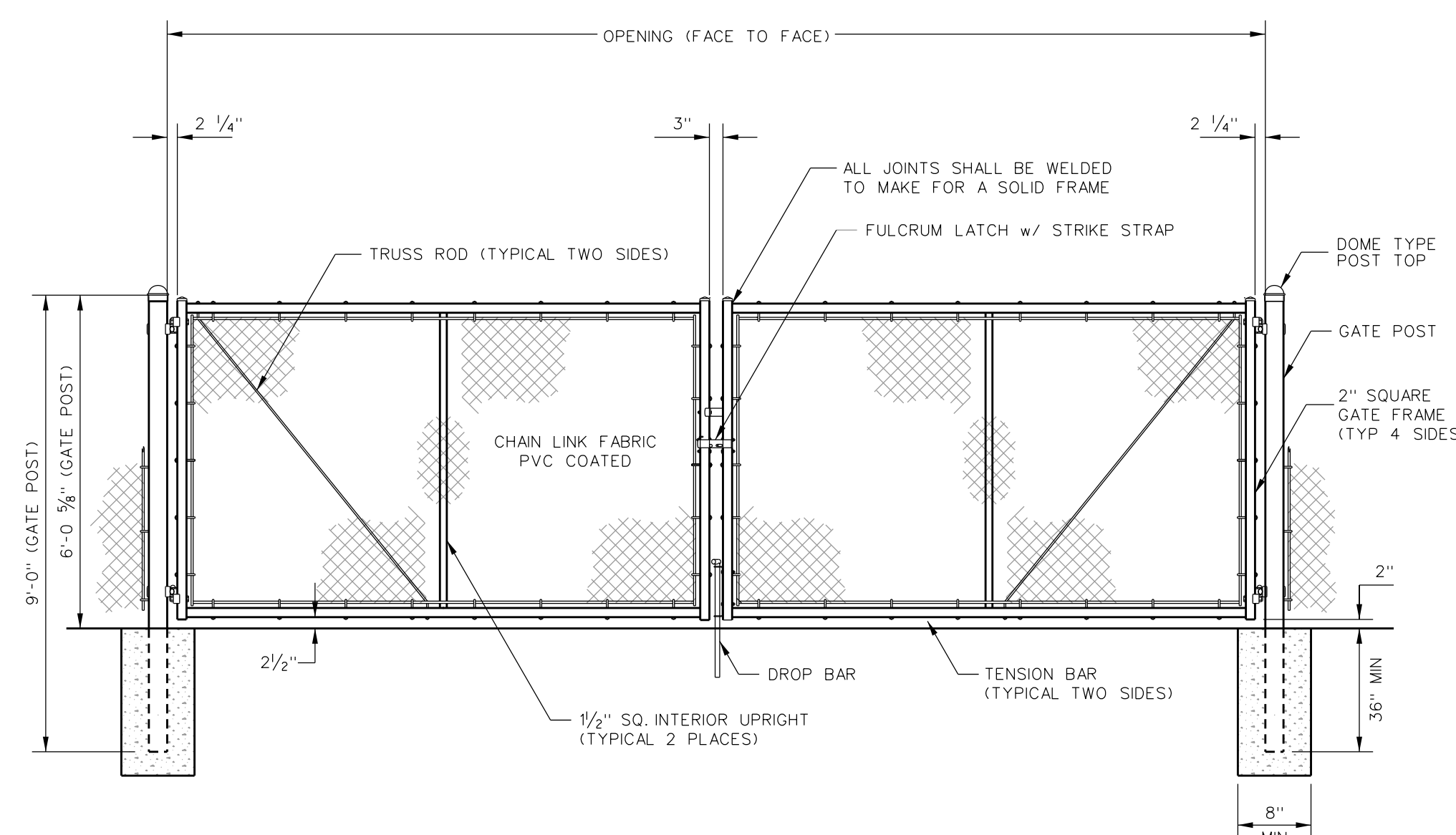


HMA Driveway with 6" Aggregate Base



Chain Link Fence

C-2, DGN



Chain Link Fence Double Swing Gate

C-2, DGN

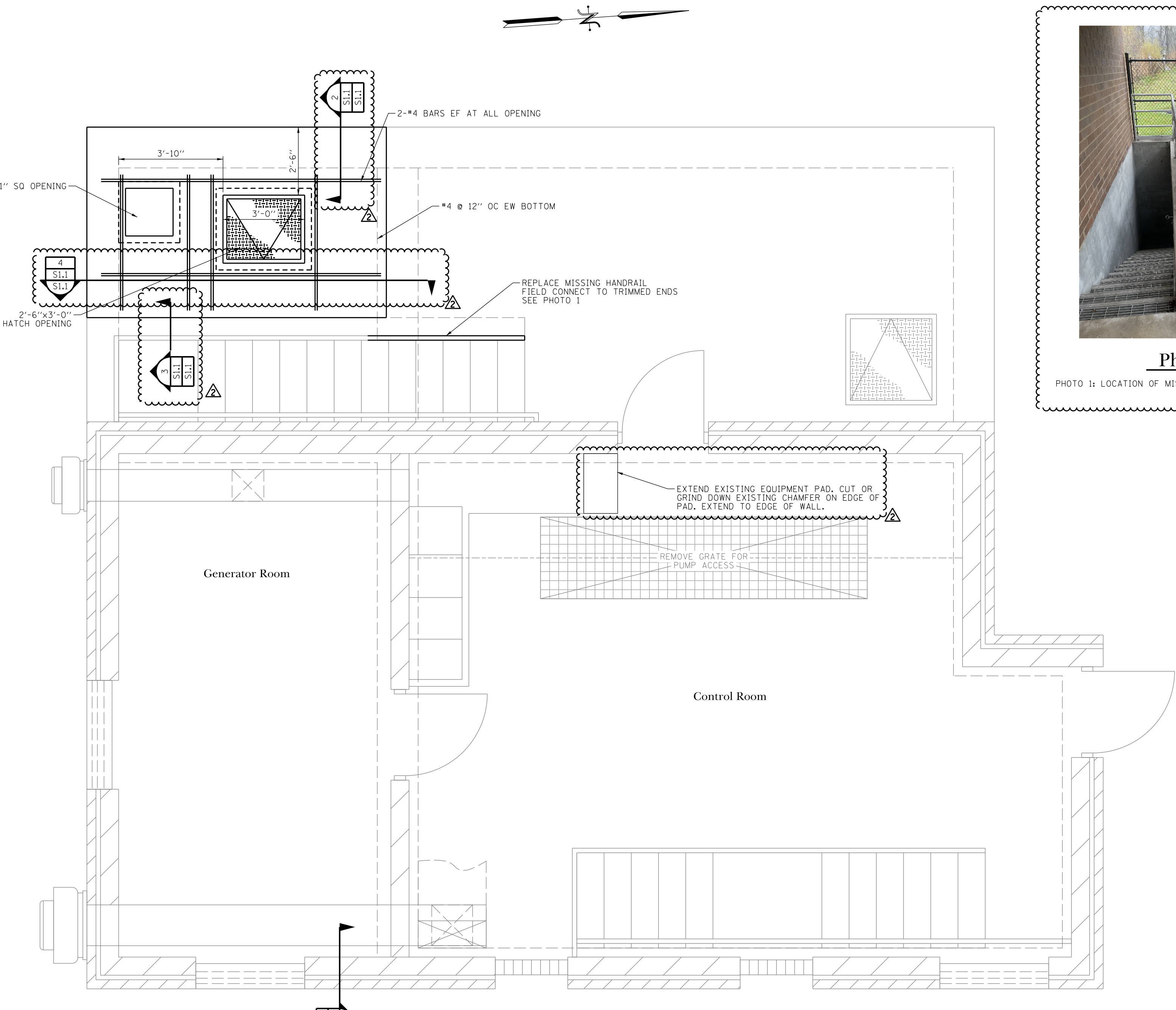
DATE	REVISIONS	ISSUE
11/22/24		1.
11/4/24		2.

PROJECT STAFF	ISSUE
ENGINEER: JILLIAN R. FLE	
INSPECTOR: DAVID BRONKHORST	
INSPECTOR: JENNIFER ZATKO, E.L.T.	
INSPECTOR: MIKE DAVISON	
TECHNICIAN: JENNIFER ZATKO	
TECHNICIAN: JENNIFER ZATKO	

TROTTER ASSOCIATES, INC.
CONSULTING ENGINEERS
40501 Weber Road, Suite D
St. Charles, IL 60175
Ph: 630-587-4700 • Fax: 630-587-4715

Braewood Pump Station Rehabilitation
Details
Algonquin, Kane County, Illinois

Project No.: ALG037
Plot Date: 11/22/2024
Scale: N.T.S.
Sheet Number
C.2



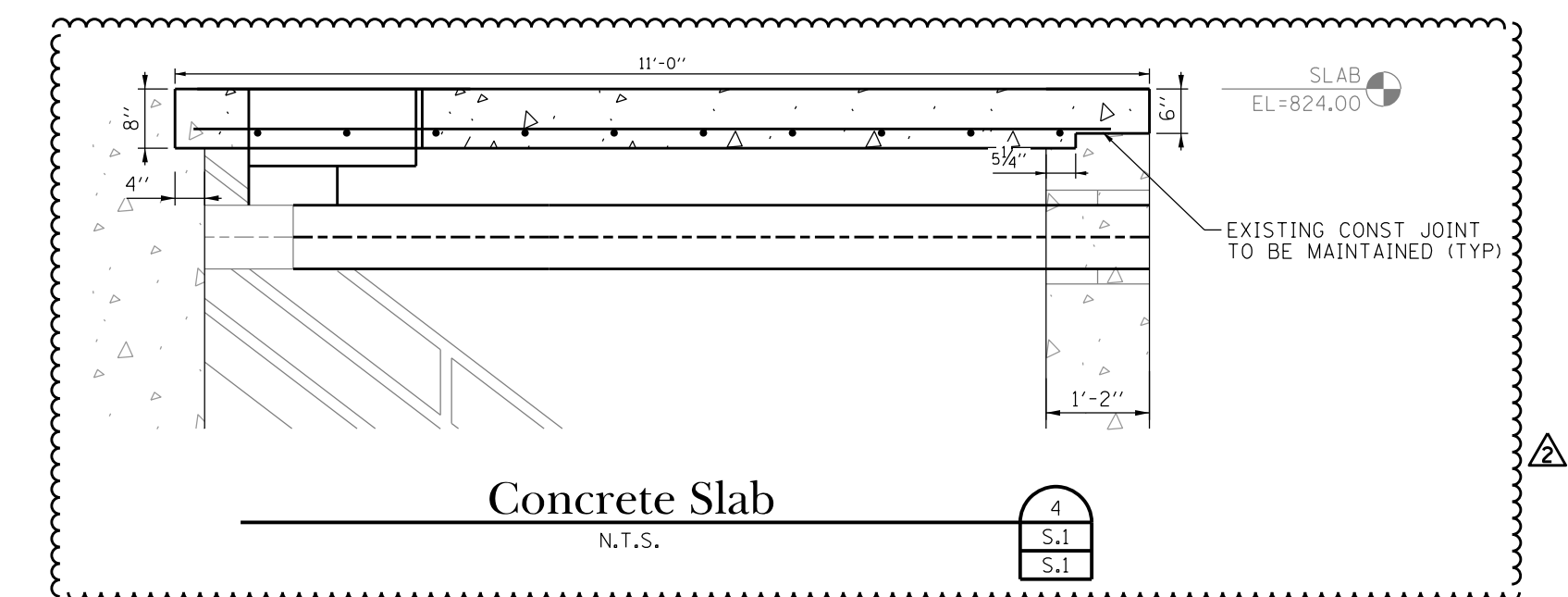
Upper Level Pump Station Hatch Framing Plan

SCALE: 3/8" = 1'-0"



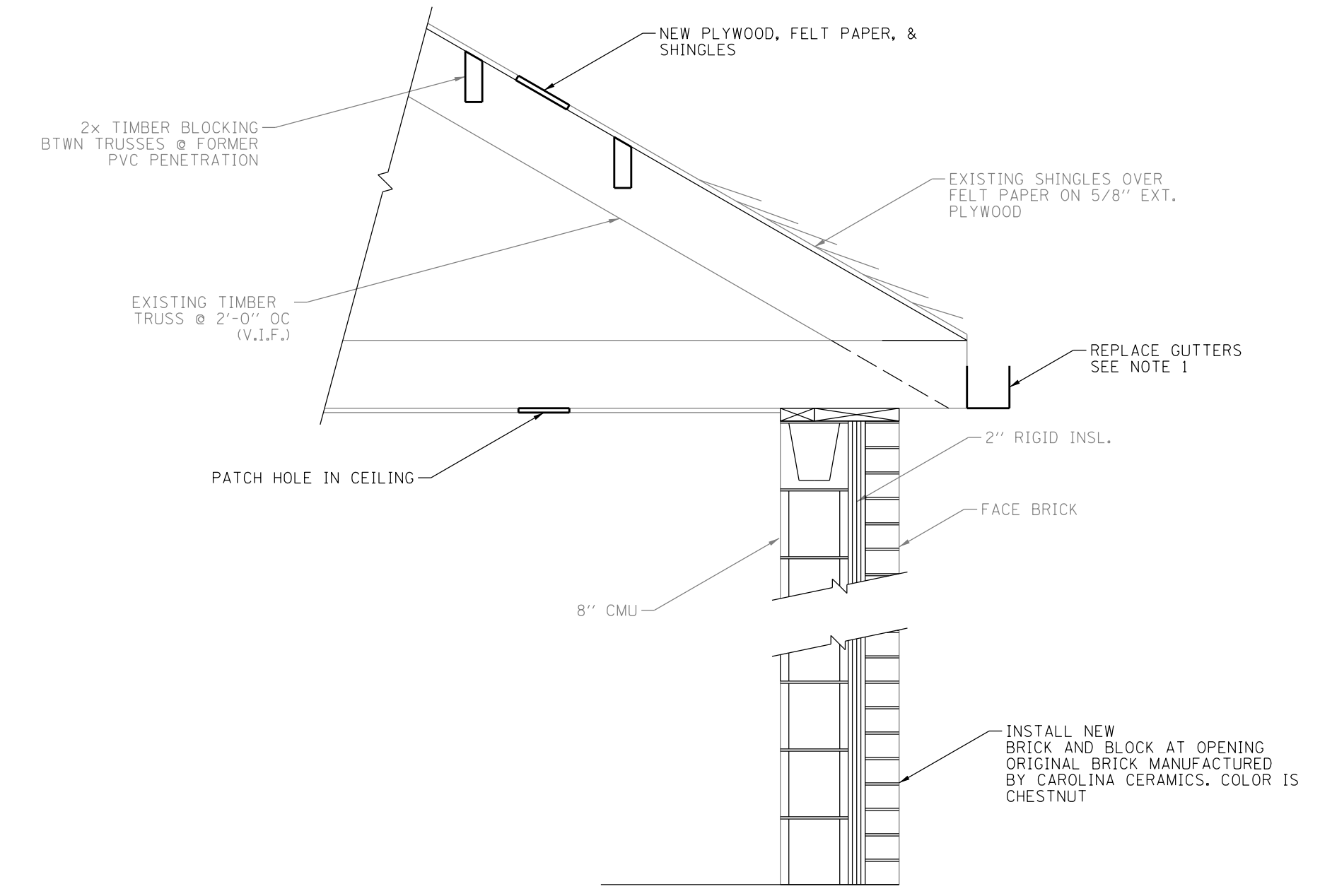
Photo 1

PHOTO 1: LOCATION OF MISSING HANDRAIL TO BE REPLACED



Concrete Slab

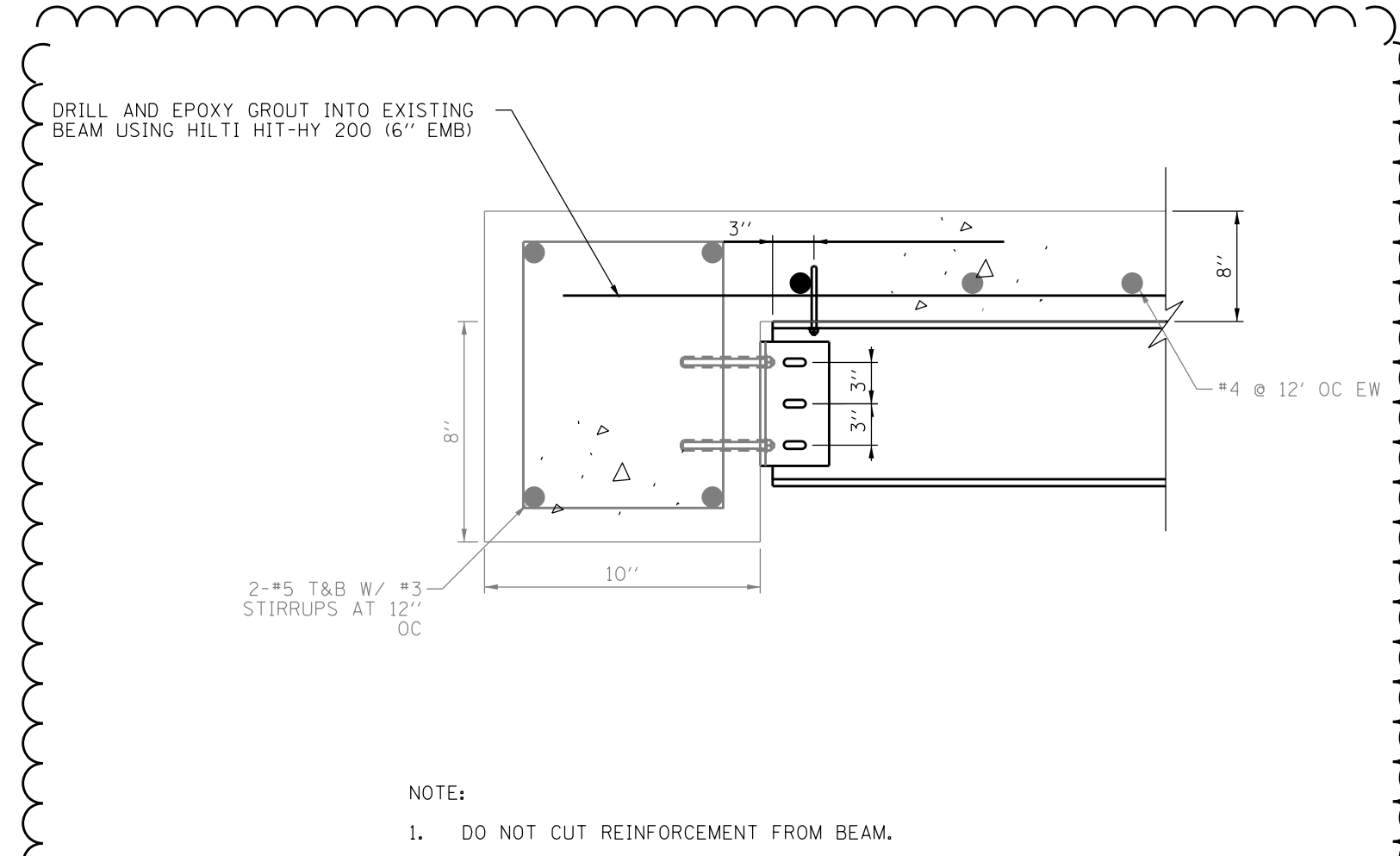
N.T.S.



Roof and Wall Repair Detail

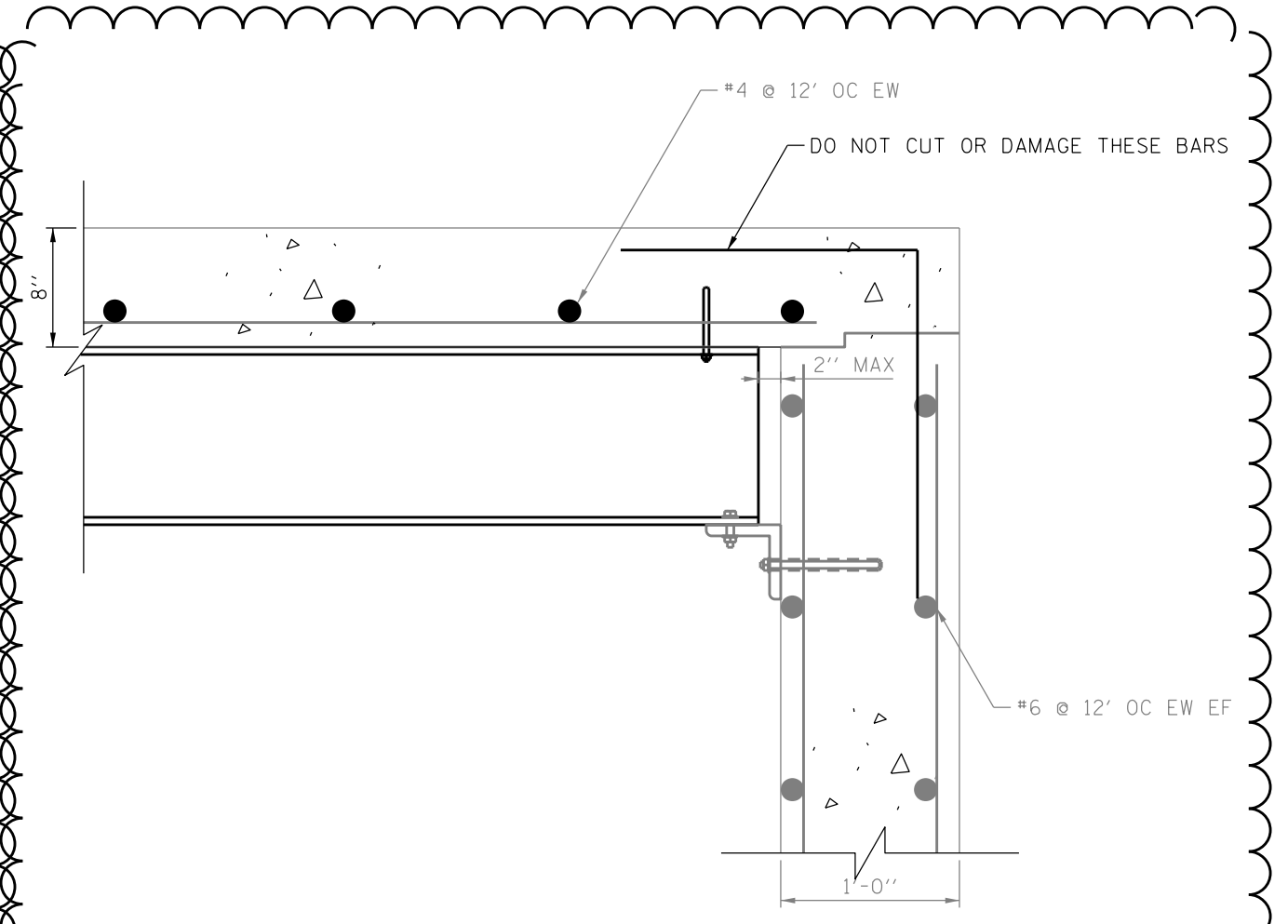
N.T.S.

- NOTE:
- CONTRACTOR TO REPLACE ALL EXISTING BUILDING GUTTERS (EAST AND WEST SIDE) MATCH EXISTING, ALUMINUM WITH BAKED WHITE FINISH AND 4 DOWNSPOUTS, PROVIDE SUBMITTAL FOR APPROVAL BY ENGINEER.



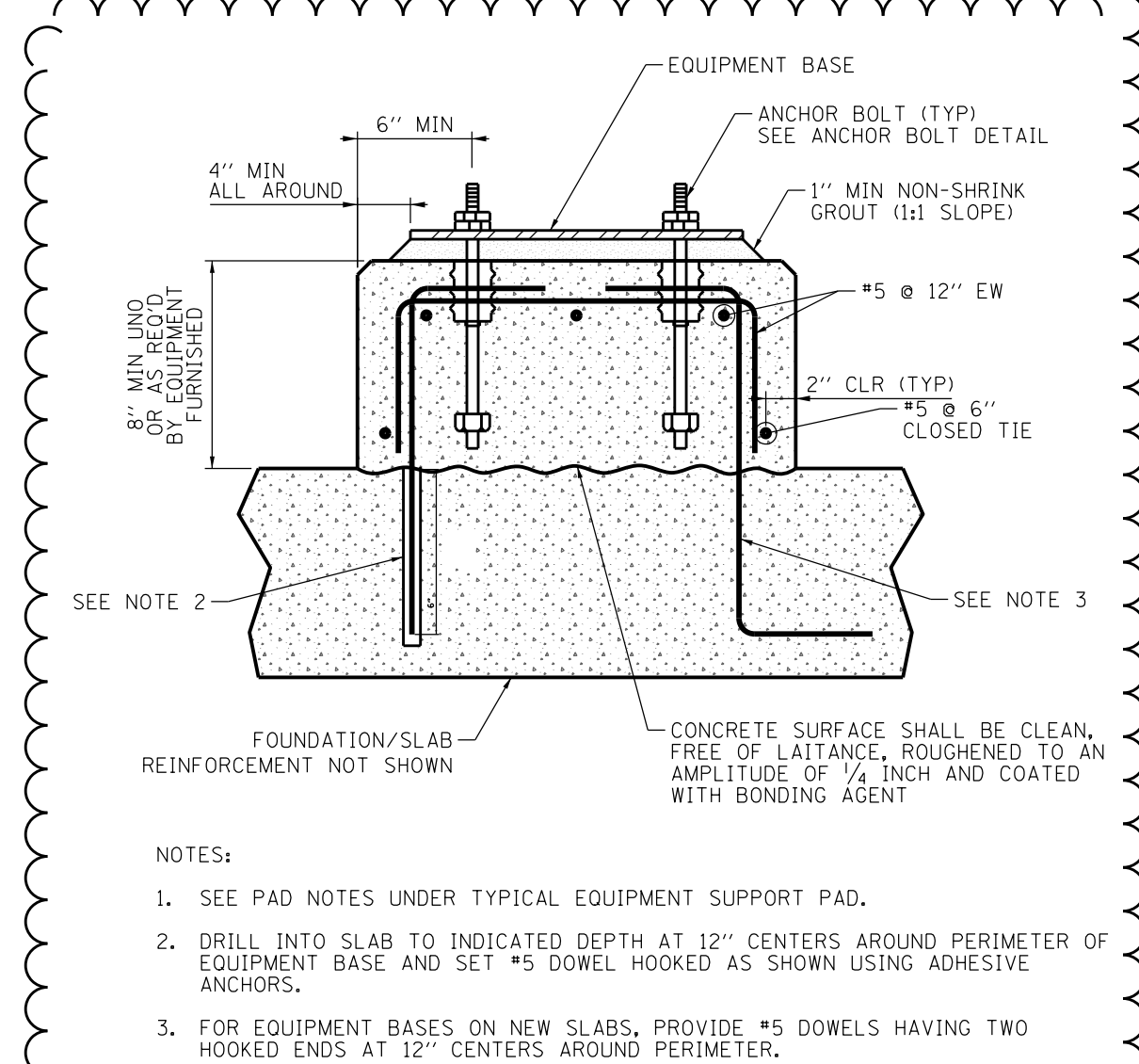
Slab to Concrete Beam

N.T.S.



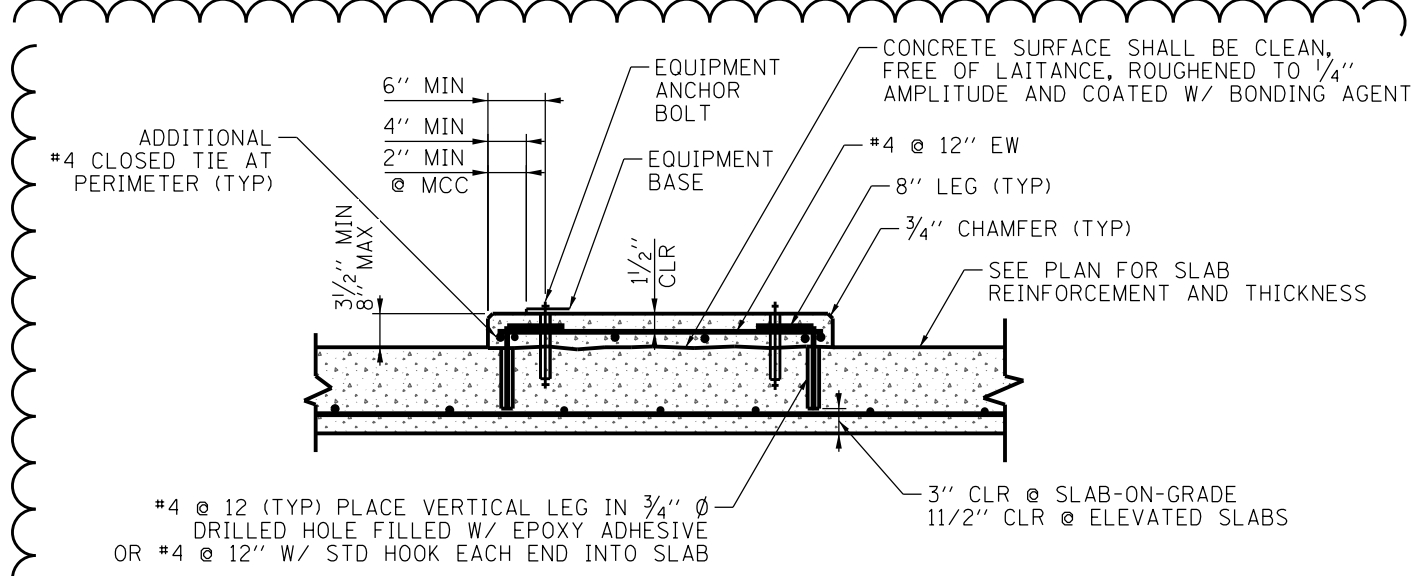
Slab to Concrete Wall

N.T.S.



Typical Tall Equipment Support Pad

N.T.S.



Typical Equipment Support Pad

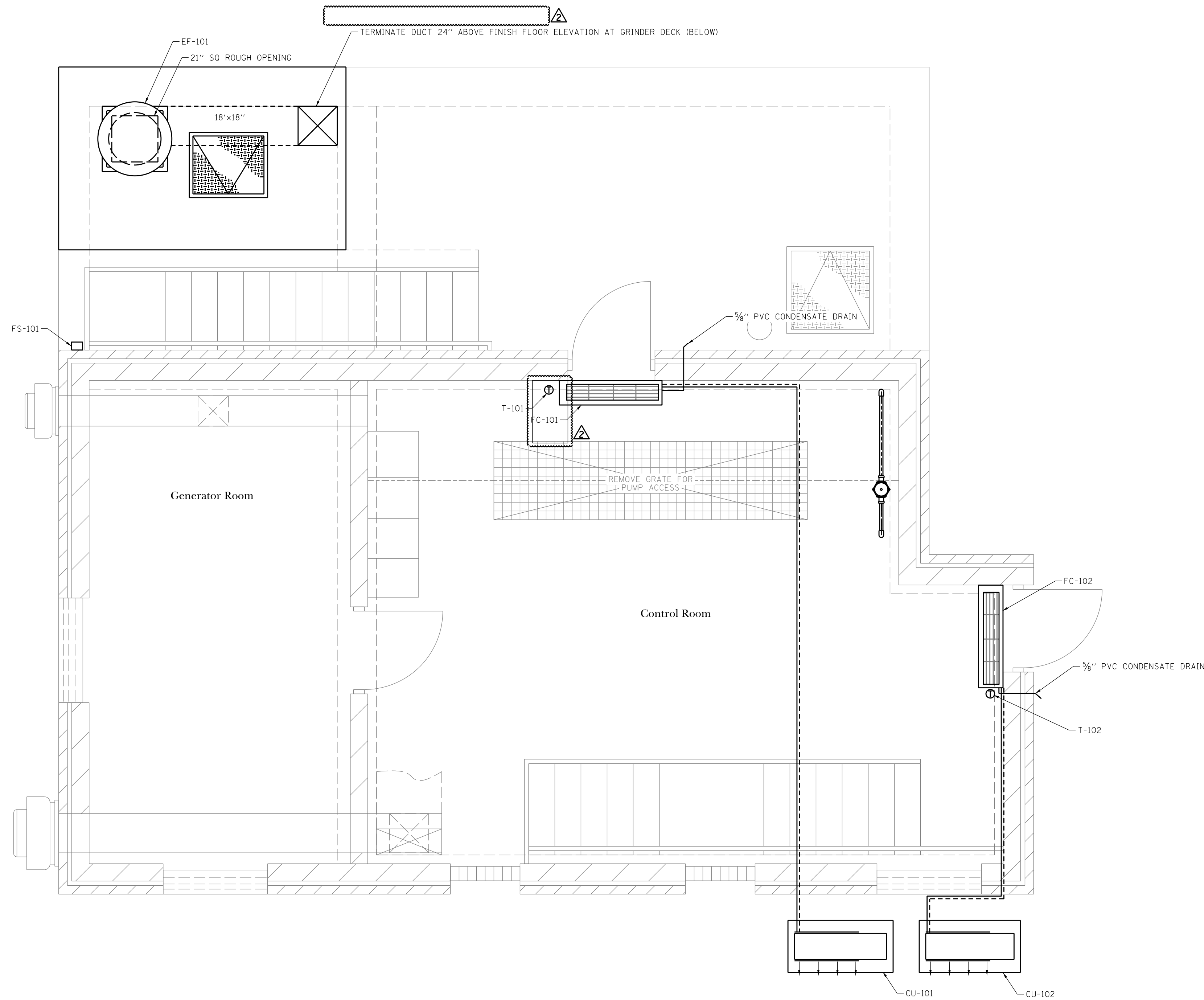
N.T.S.

- GENERAL NOTES:
- PROVIDE PAD UNDER ALL ELECTRICAL AND MECHANICAL EQUIPMENT SUPPORTED ON STRUCTURAL SLABS. ALSO PROVIDE FOR EQUIPMENT WEIGHING LESS THAN 5000 POUNDS WHICH ARE SUPPORTED ON GRADE, OR WHERE SPECIFICALLY NOTED ON PLANS, FOR PAD HEIGHT GREATER THAN 8'; SEE "TYPICAL TALL EQUIPMENT SUPPORT PAD".
 - PROVIDE AN ADDITIONAL LAYER OF #4 @ 12" EACH WAY WITH 1 1/2" CLEAR TOP AND BOTTOM FOR EACH 8" ADDITIONAL PAD THICKNESS EXCEEDING THE 3" MINIMUM THICKNESS. ALTERNATIVELY, THICKEN SLAB ON GRADE BELOW EQUIPMENT PAD AS REQUIRED TO MAINTAIN MIN 3" COVER ON ANCHOR BOLTS.
- PAD NOTES:
- PAD DETAILS 5 & 6 ON THIS SHEET APPLY FOR SUPPORT OF ALL EQUIPMENT UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - BEFORE EQUIPMENT SUPPORT PADS ARE CAST, THE PAD SIZES AND REINFORCING SHALL BE APPROVED BY THE ENGINEER AS BEING CAPABLE OF SUPPORTING EQUIPMENT TO BE PLACED THEREON. EQUIPMENT BASE DIMENSIONS SHALL BE THE LARGER OF AS DETERMINED BY THE EQUIPMENT MANUFACTURER OR AS INDICATED ON THE DRAWINGS. SUBMIT ALL EQUIPMENT DIMENSIONS AND LOADS TO ENGINEER.
 - 6" MINIMUM PAD EDGE DIMENSION TO EQUIPMENT ANCHOR BOLT APPLIES FOR ALL NON-ELECTRICAL EQUIPMENT SUPPORT PADS. FOR ELECTRICAL EQUIPMENT, PROVIDE 1" FROM EDGE OF EQUIPMENT BASE TO EDGE OF CONCRETE.
 - THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE EQUIPMENT PAD IS CAST.
 - EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS NOTED OTHERWISE. TOLERANCE IS 1/8" ACROSS PLAN DIAGONALS.

PROJECT STAFF		ISSUE		REVISIONS		DATE
ENGINEER	JILLIAN R. P.E.	ISSUE	1			11/22/24
DESIGNER	JUSTIN ZATKO, E.L.T.	ISSUE	2			11/22/24
CHECKER	MIDIAN JONES	ISSUE	1			11/22/24
TECHNICAL	DOVIE BOHNET	ISSUE	1			11/22/24
ADDENDUM #1						11/22/24
ISSUED FOR BIDDING						11/24/24

Braewood Pump Station Rehabilitation
Upper Level Structural Plan and Details
Algonquin, Kane County, Illinois

- NOTES:
1. CONCRETE EQUIPMENT PAD REQUIRED FOR CU-101 & CU-102.
 2. COORDINATE CONDENSATE DRAIN FROM FC-101 & 102 TO BUILDING EXTERIOR OR NEAREST FLOOR DRAIN.
 3. COORDINATE LAYOUT OF CONDENSING UNITS WITH MANUFACTURER TO ENSURE PROPER CLEARANCES ARE MAINTAINED.
 4. EF-101 SHALL BE INTERLOCKED WITH FAN SWITCH (FS-101) SO THAT FAN TURNS ON WHEN WET WELL/STAIRWAY IS OCCUPIED.



Control Room HVAC Plan
SCALE: 3/8" = 1'-0"



FAN COIL PERFORMANCE DATA (COOLING ONLY)											
MARK NO.	LOCATION	CFM	MEDIA	TH MBH	SEN CAP MBH	AIR ON DB	AIR OFF DB	SP DROP IN WC	ELEC DATA	BASIS OF DESIGN	REMARKS
FC-101	CONTROL ROOM	705	R-410A	36	16	90	66	N/A	SEE CU DATA	MITSUBISHI PKA-A36KA7	1, 2, 3
FC-102	CONTROL ROOM	705	R-410A	36	16	90	66	N/A	SEE CU DATA	MITSUBISHI PKA-A36KA7	1, 2, 3

NOTES:
 1. UNIT POWERED FROM RESPECTIVE CONDENSING UNIT
 2. PROVIDE UNIT MOUNTED DISCONNECT FOR INDOOR UNITS
 3. PROVIDE WITH 7-DAY PROGRAMMABLE DOC WALL THERMOSTAT

AIR COOLED CONDENSING UNIT PERFORMANCE DATA (COOLING ONLY)												
MARK NO.	LOCATION	SERVES	REFRIG.	TON	AMBIENT TEMP °F	MCA	MOCP	VOLTS	PH	REFRIG	BASIS OF DESIGN	REMARKS
CU-101	CONTROL ROOM	FC-101	R-410A	3	95	25	31	208	1	R-410A	MITSUBISHI PLY-A36KA7	1, 2
CU-102	CONTROL ROOM	FC-102	R-410A	3	95	25	31	208	1	R-410A	MITSUBISHI PLY-A36KA7	1, 2

NOTES:
 1. UNIT SHALL BE ANCHORED TO A CONCRETE EQUIPMENT PAD WITH MANUFACTURER'S MOUNTING DUAL FAN STAND.
 2. PROVIDE WITH WIND BAFFLES.

THERMOSTAT SCHEDULE					
MARK NO.	LOCATION	SERVES	SETPPOINT	MODEL	REMARKS
T-101	CONTROL ROOM	FC-101	80° F	PAR-FL32MA-E	1, 2
T-102	CONTROL ROOM	FC-102	80° F	PAR-FL32MA-E	1, 2

NOTES:
 1. WIRING AND CONDUIT BY ELECTRICAL SUBCONTRACTOR, WIRE TERMINATIONS BY MECHANICAL SUBCONTRACTOR
 2. WIRELESS REMOTE THERMOSTAT.

FAN PERFORMANCE DATA											
MARK NO.	SERVES	TYPE	CFM	SP DROP INS W.C	RPM	STATIC EFF %	HP	VOLTS	PH	BASIS OF DESIGN	REMARKS
EF-101	WET WELL	BELT DRIVE DOWNBLAST	2300	0.125	1750	22.1	0.25	115	1	ACME PV165 - EXP	1, 2, 3, 4, 5

NOTES:
 1. PROVIDE ACME SEAL CHARCOAL GRAY POWDER COATING AND WITH STAINLESS STEEL FASTENERS.
 2. PROVIDE WITH LOCAL DISCONNECT SWITCH AND MOTOR STARTER RATED FOR A CLASS 1 DIV 2 ENVIRONMENT.
 3. PROVIDE WITH MOTORIZED BACKDRAFT DAMPERS AS PART OF THE FAN ASSEMBLY.
 4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 5. UNIT SHALL BE INTERLOCKED WITH SWITCH TO RUN ONLY WHEN SPACE IS OCCUPIED.

PROJECT STAFF

ENGINEER	JILLIAN R. FLE
DESIGNER	JUSTIN BRUNDALE
PROJECT MANAGER	JUSTIN ZATTO, P.E.
TECHNICIAN	MICHAEL DODD
TECHNICIAN	DOUG BOSTON

ISSUE

2.	1.
----	----

REVISIONS

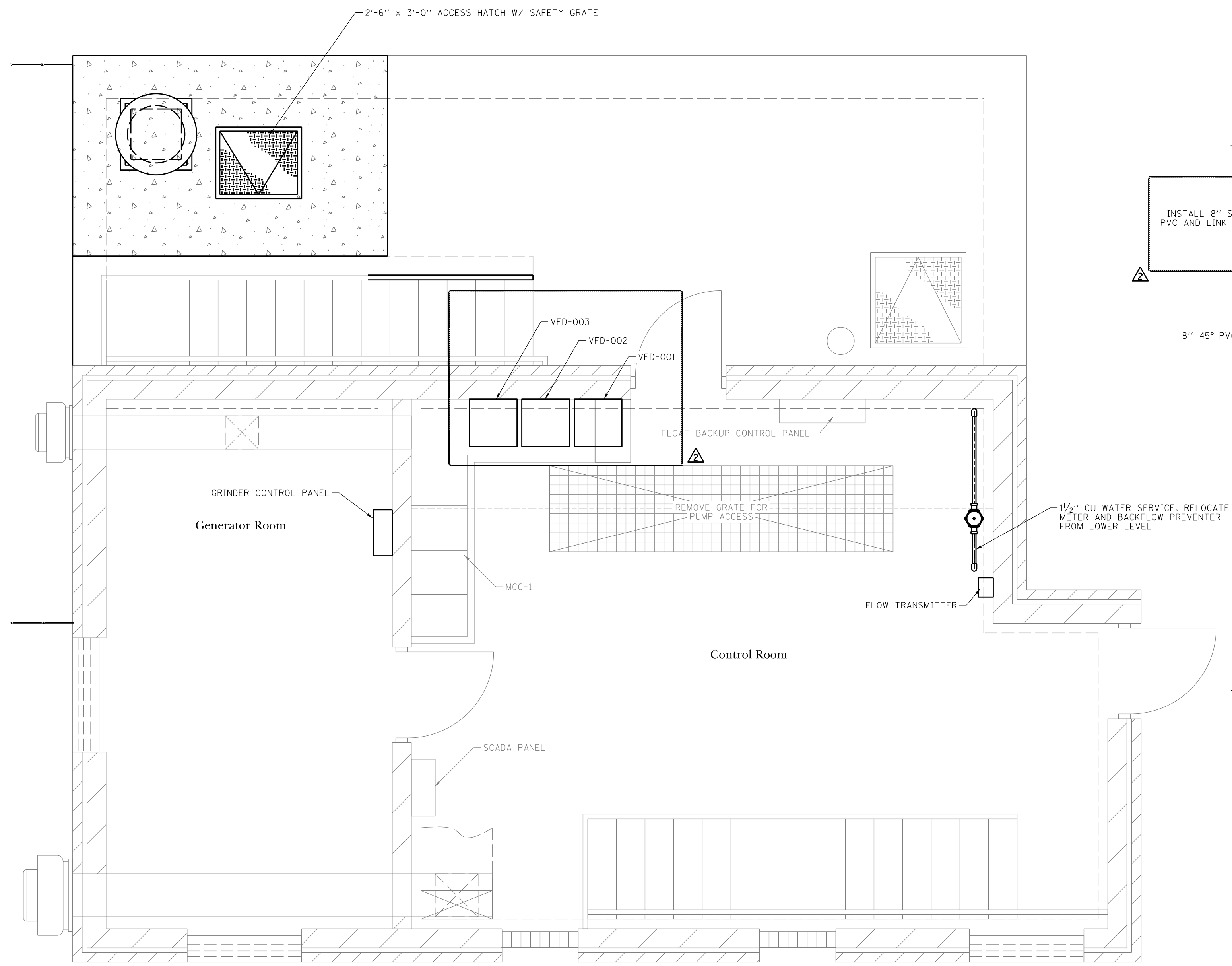
DATE	11/22/24
DATE	11/4/24

ADDENDUM #1
ISSUED FOR BIDDING

TROTTER ASSOCIATES, INC.
CONSULTING ENGINEERS
40501 Weber Road, Suite D
St. Charles, IL 60175
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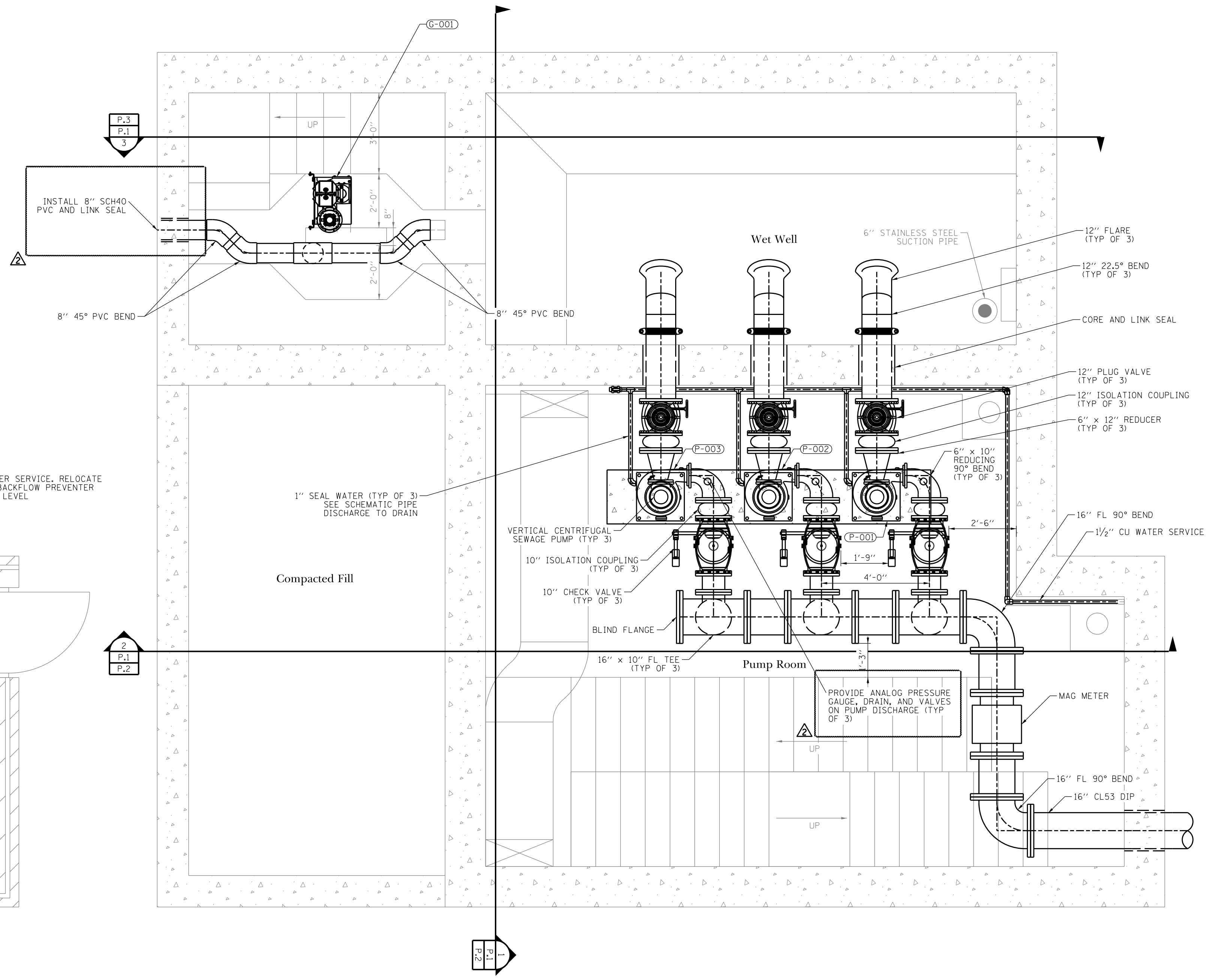
Braewood Pump Station Rehabilitation
Control Room HVAC Plan
Algonquin, Kane County, Illinois

- NOTES:
1. ALL PIPING, FITTINGS, AND SUPPORTS TO BE PROVIDED BY CONTRACTOR, UNLESS NOTED OTHERWISE.
 2. SOME ITEMS NOT SHOWN FOR CLARITY.
 3. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND PIPING LAYOUT.
 4. CONTRACTOR TO ORDER CONTROL & POWER CORDS OF SUFFICIENT LENGTH TO REACH CONTROL PANEL FROM POINT OF ORIGIN ON PUMPS WITHOUT SPLICING.
 5. CONTRACTOR SHALL MAKE ALL NECESSARY MODIFICATIONS AND CONNECTIONS FOR PUMP WATER LINES.
 6. CONTRACTOR SHALL PROVIDE INSULATION FOR WATER LINES.
 7. CONTRACTOR SHALL CLEAN AND PAINT ALL PROPOSED EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC.
 8. VILLAGE SHALL OPERATE ALL VALVES.



Upper Level Pump Station Process Plan

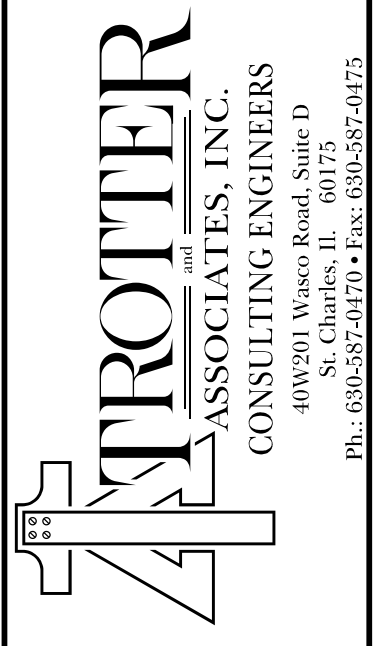
SCALE: 3/8" = 1'-0"



Lower Level Pump Station Process Plan

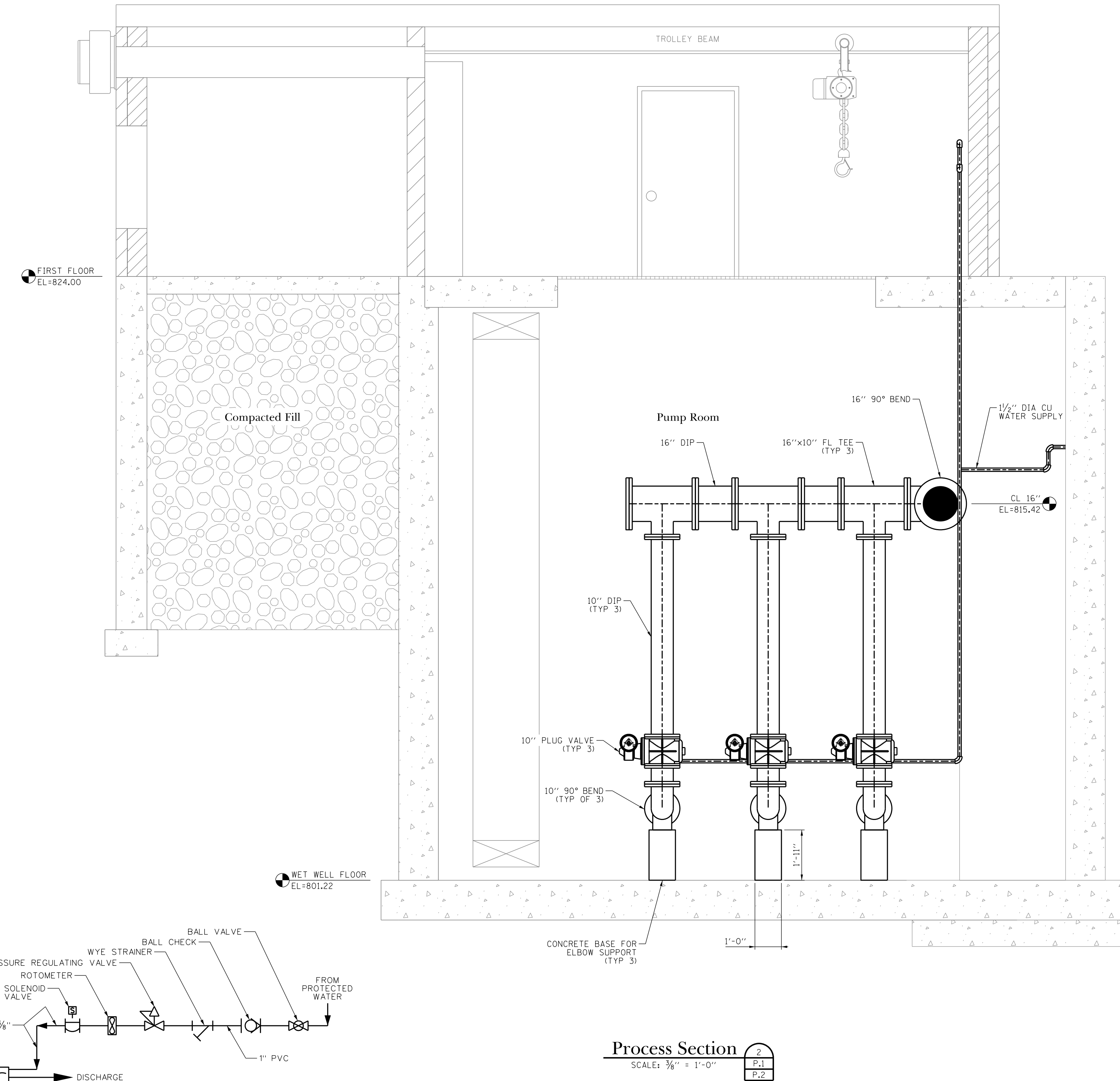
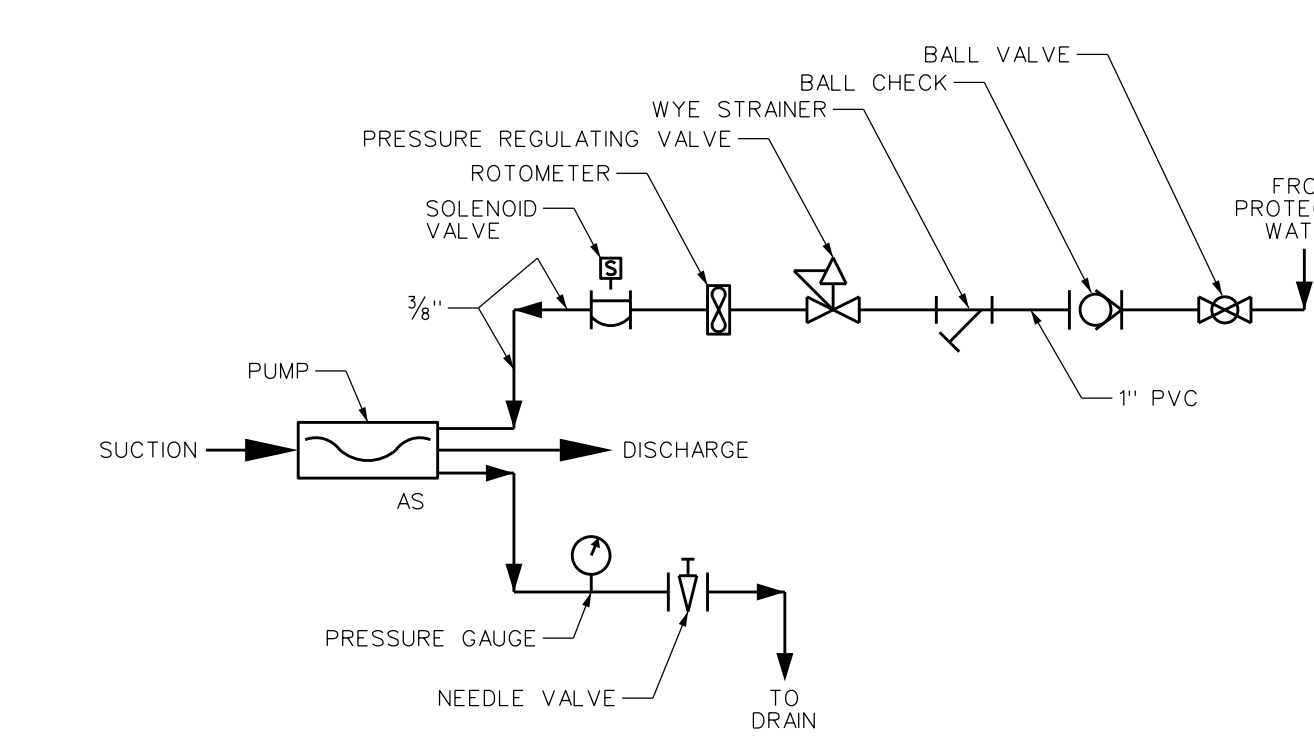
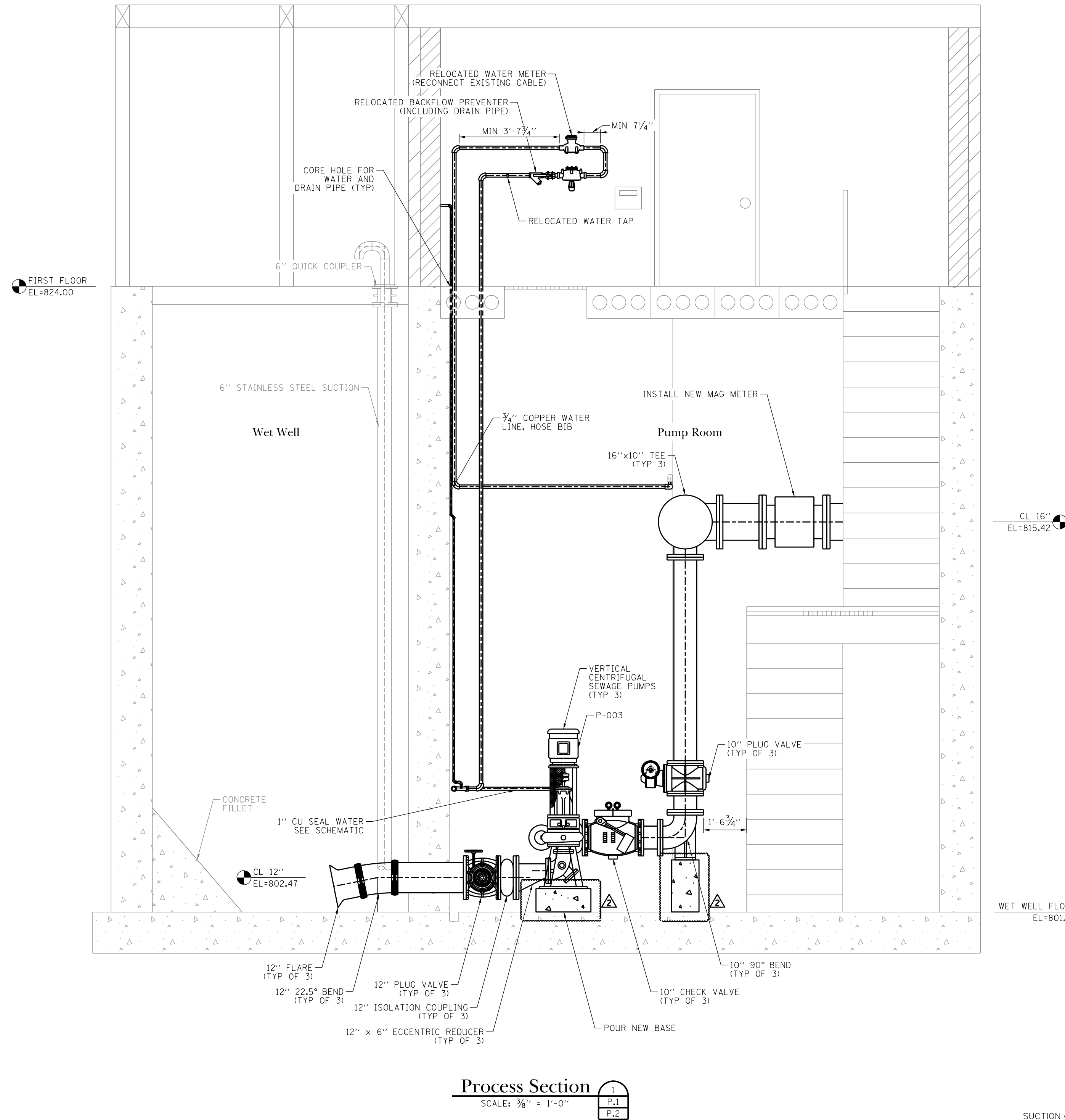
SCALE: 3/8" = 1'-0"

PROJECT STAFF		REVISIONS		DATE
ENGINEER	JILLIAN R. FLE	NO.	DESCRIPTION	DATE
DESIGNER	JUSTIN ZATKO, E.L.T.	1.		11/22/24
TECHNICIAN	MICHAEL J. DAVIS	2.		11/22/24
TECHNICIAN	DOUGLAS B. BENT	1.		11/22/24
ADDENDUM #1				11/22/24
ISSUED FOR BIDDING				11/22/24



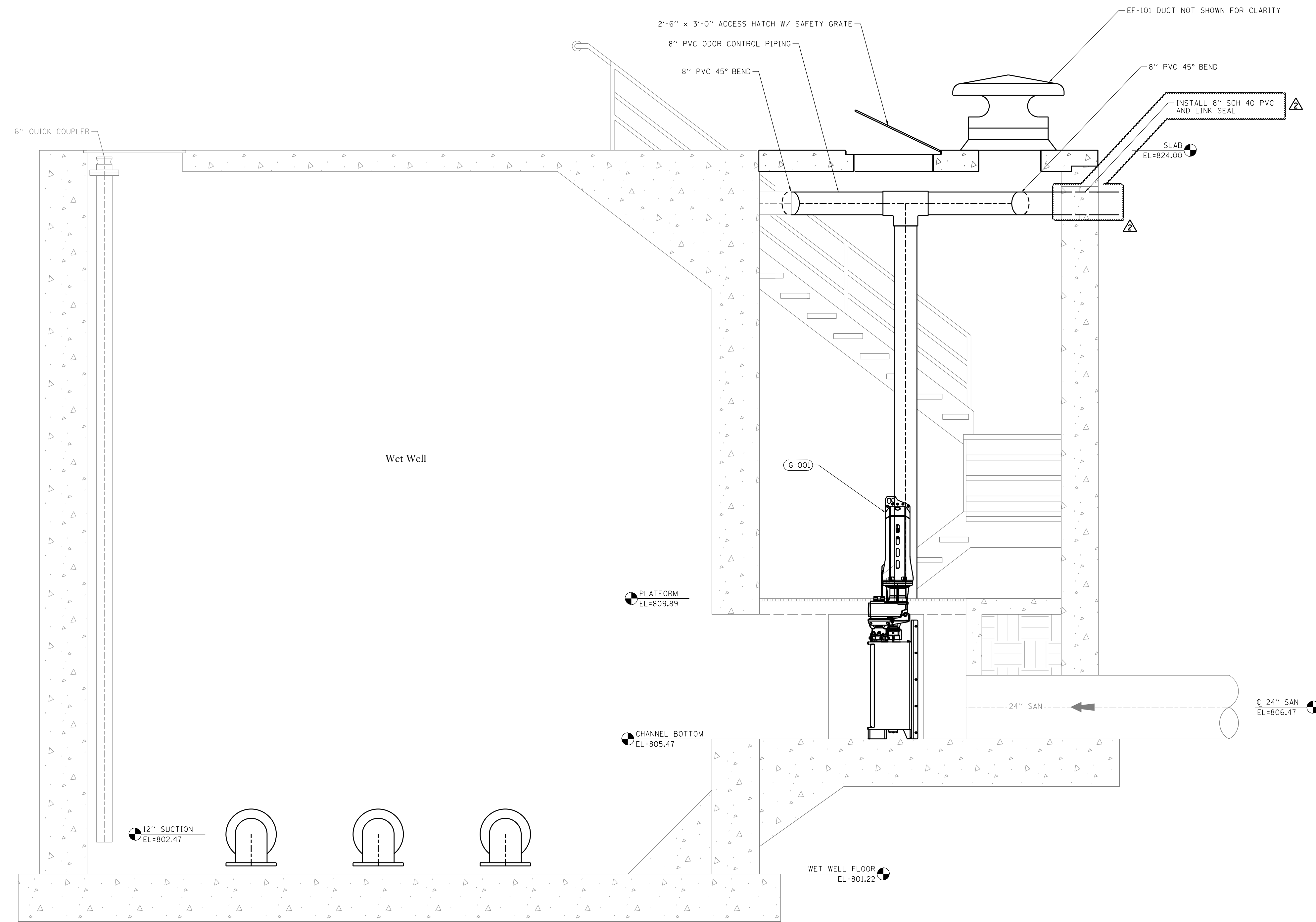
Braewood Pump Station Rehabilitation
Upper and Lower Level Process Plan
Algonquin, Kane County, Illinois

- NOTES:
1. ALL PIPING, FITTINGS, AND SUPPORTS TO BE PROVIDED BY CONTRACTOR, UNLESS NOTED OTHERWISE.
 2. SOME ITEMS NOT SHOWN FOR CLARITY.
 3. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND PIPING LAYOUT.
 4. CONTRACTOR TO ORDER CONTROL & POWER CORDS OF SUFFICIENT LENGTH TO REACH CONTROL PANEL FROM POINT OF ORIGIN ON PUMPS WITHOUT SPLICING.
 5. CONTRACTOR SHALL MAKE ALL NECESSARY MODIFICATIONS AND CONNECTIONS FOR PUMP WATER LINES.
 6. CONTRACTOR SHALL PROVIDE INSULATION FOR WATER LINES.
 7. CONTRACTOR SHALL CLEAN AND PAINT ALL PROPOSED EQUIPMENT, PIPING, INSULATION, SUPPORTS, ETC.
 8. VILLAGE SHALL OPERATE ALL VALVES.



DATE	11/22/24
ISSUE	1.
REVISIONS	
PROJECT STAFF	ENGINEER: JILLIAN R. FLE ENGINEER: JENNIFER B. WALKER ENGINEER: JENNIFER ZATKO, EIT ENGINEER: MILDRED J. WOOD TECHNICIAN: JENNIFER B. WALKER
PROJECT NAME	Braewood Pump Station Rehabilitation
PROJECT LOCATION	Algonquin, Kane County, Illinois
PROJECT NUMBER	ALG037
PROJECT DATE	11/22/2024
SCALE	3/8" = 1'-0"
SHEET NUMBER	P.2
ADDENDUM #1	ISSUED FOR BIDDING

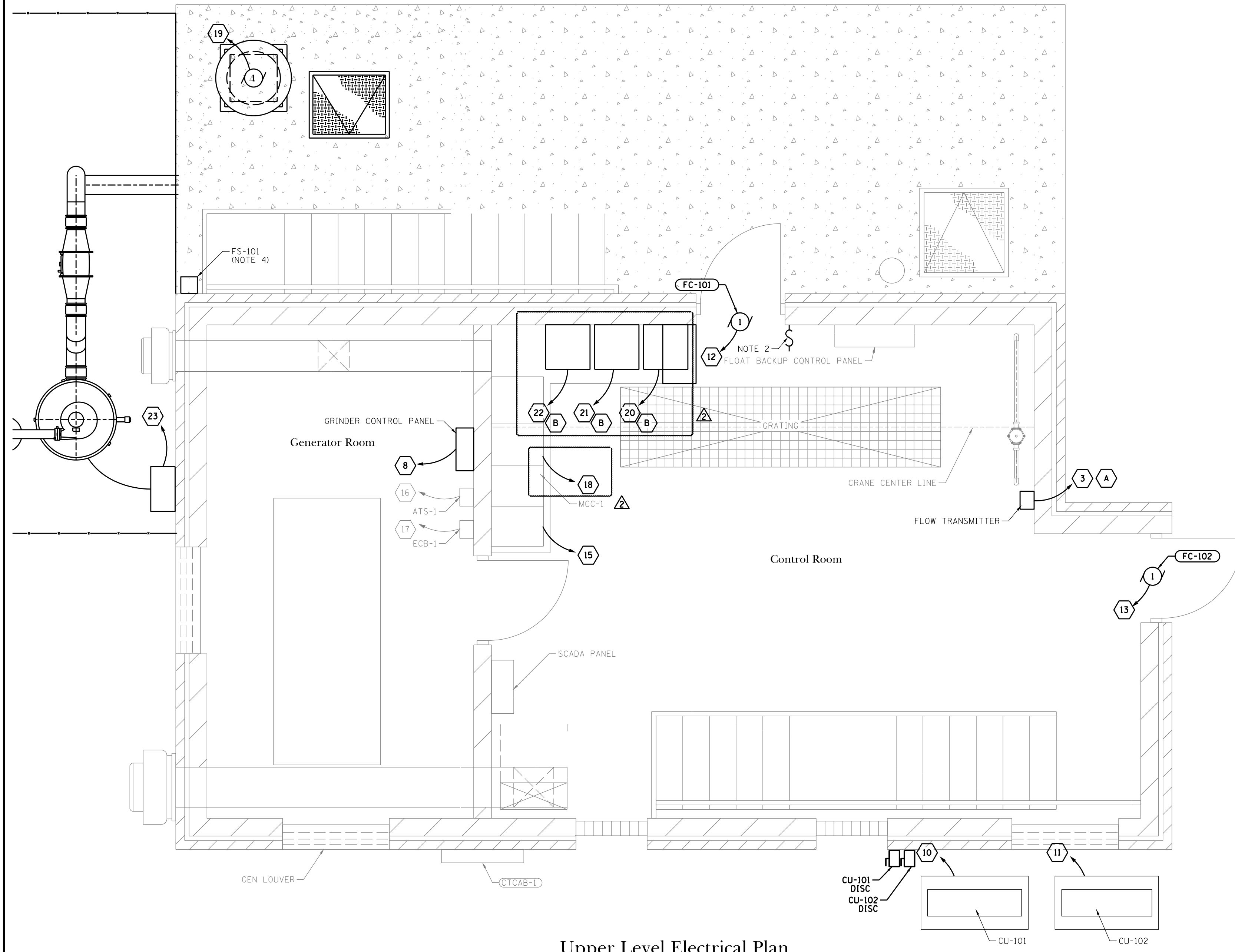
TROTTER ASSOCIATES, INC.
CONSULTING ENGINEERS
40501 Weber Road, Suite D
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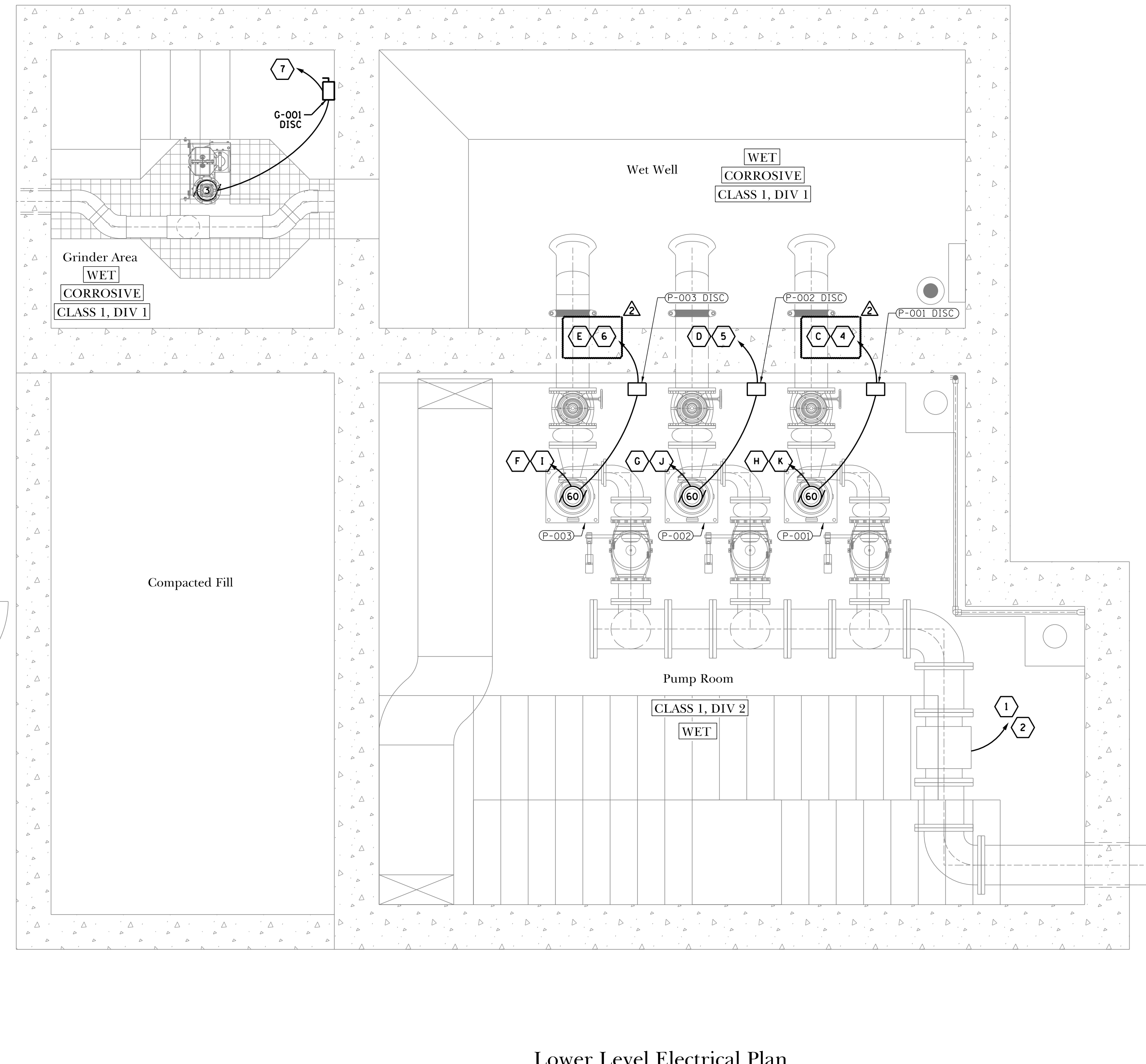
Process Section
 SCALE: 1/2" = 1'-0"
 3
 P.1
 P.3

- NOTE:
1. CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND PIPING LAYOUT.
 2. SOME ITEMS NOT SHOWN FOR CLARITY.

PROJECT STAFF		ISSUE	REVISIONS	DATE
ENGINEER	JILLANNE P.E.			
ENGINEER	DAVID BISHOP, P.E.			
ENGINEER	JUSTIN ZATKO, P.E.			
TECHNICIAN	MICHAELSON			
TECHNICIAN	DANIEL BOYNT			
		2.		11/22/24
		1.		11/4/24
			ADDENDUM #1	
			ISSUED FOR BIDDING	
 TROTTER ASSOCIATES, INC. CONSULTING ENGINEERS 40500 Wood Road, Suite D St. Charles, IL 60175 Ph: 630-587-0700 • Fax: 630-587-0715				
Braewood Pump Station Rehabilitation Process Section Algonquin, Kane County, Illinois				
Project No.:	ALG037			
Plot Date:	11/22/2024			
Scale:	1/2" = 1'-0"			
Sheet Number	P.3			



Upper Level Electrical Plan
SCALE: 3/8" = 1'-0"



Lower Level Electrical Plan
SCALE: 3/8" = 1'-0"

EQUIPMENT POWER WIRING:

- 1 MNFR CABLE FROM MAGNETIC FLOW METER TO NEW FLOW TRANSMITTER IN CONTROL ROOM ON UPPER LEVEL
- 2 GROUND FLOW METER TO PROCESS PIPE PER MNFR INSTRUCTIONS
- 3 [2] *12 PH + [1] *12 EGC IN 3/4" C TO LP-A (FLOW TRANSMITTER POWER)
- 4 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO MCC-1 (P-001 DISC)
- 5 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO MCC-1 (P-002 DISC)
- 6 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO P-003 VFD (P-003 DISC)
- 7 [3] *12 PH + [1] *12 EGC IN 3/4" C TO GRINDER CP (G-001 POWER)
- 8 [3] *12 PH + [1] *12 EGC IN 3/4" C TO MCC-1 (GRINDER CP FEEDER)
- 9 [3] *1 PH + [1] *8 EGC IN 1-1/4" CV TO MCC-1 (PUMP 1 VFD ENCLOSURE FEEDER)
- 10 [3] *12 PH + [1] *12 EGC IN 3/4" C TO LP-B (THRU LOCAL DISC) (CU-101 POWER)
- 11 [3] *12 PH + [1] *12 EGC IN 3/4" C TO LP-B (THRU LOCAL DISC) (CU-102 POWER)
- 12 [3] *12 PH + [1] *12 EGC IN 3/4" C TO CU-101 (FC-101 POWER)
- 13 [3] *12 PH + [1] *12 EGC IN 3/4" C TO CU-102 (FC-102 POWER)
- 14 [2] *12 PH + [1] *12 EGC IN 3/4" C TO ODOR CONTROL CP (OC UNIT POWER)
- 15 [4] 500 MCM PH + [1] *3 EGC IN EX. C TO ATS-1 (MCC-1 UPSIZED FEED)
- 16 [4] 500 MCM PH + [1] *3 EGC IN EX. C TO ECB-1 (ATS-1 UTIL UPSIZED FEED)
- 17 [4] 500 MCM PH + [1] *3 EGC IN EX. C TO CTCAB-1 (ECB-1 UPSIZED FEED)
- 18 [3] *8 PH + [1] *10 EGC IN 1-1/4" C TO LP-A (LP-B FEEDER)
- 19 [2] *12 PH + [1] *12 EGC IN 3/4" C TO LP-A (IEF-1 FEEDER)
- 20 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO MCC-1 (VFD-001 FEEDER)
- 21 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO MCC-1 (VFD-002 FEEDER)
- 22 [3] *1 PH + [1] *8 EGC IN 1-1/4" C TO MCC-1 (VFD-003 FEEDER)
- 23 [3] *12 PH + [1] *12 EGC IN 3/4" C TO MCC-1 (OC CONTROL PANEL FEEDER)

EQUIPMENT CONTROL WIRING:

- A [1] CAT 6A IN 3/4" C TO EXISTING PLC (FLOW TRANSMITTER)
- B [1] CAT 6A IN 3/4" C TO EXISTING PLC (VFD SCADA)
- C [1] *14 TO P-001 VFD DISABLE PORT (P-001 DISC AUX CONTACT)
- D [1] *14 TO P-002 VFD DISABLE PORT (P-002 DISC AUX CONTACT)
- E [1] *14 TO P-003 VFD DISABLE PORT (P-003 DISC AUX CONTACT)
- F [2] *14 TO P-001 VFD (P-001 MOTOR OVERTEMP)
- G [2] *14 TO P-002 VFD (P-002 MOTOR OVERTEMP)
- H [2] *14 TO P-003 VFD (P-003 MOTOR OVERTEMP)
- I [2] *14 TO P-001 VFD (P-001 SOLENOID VALVE)
- J [2] *14 TO P-002 VFD (P-002 SOLENOID VALVE)
- K [2] *14 TO P-003 VFD (P-003 SOLENOID VALVE)

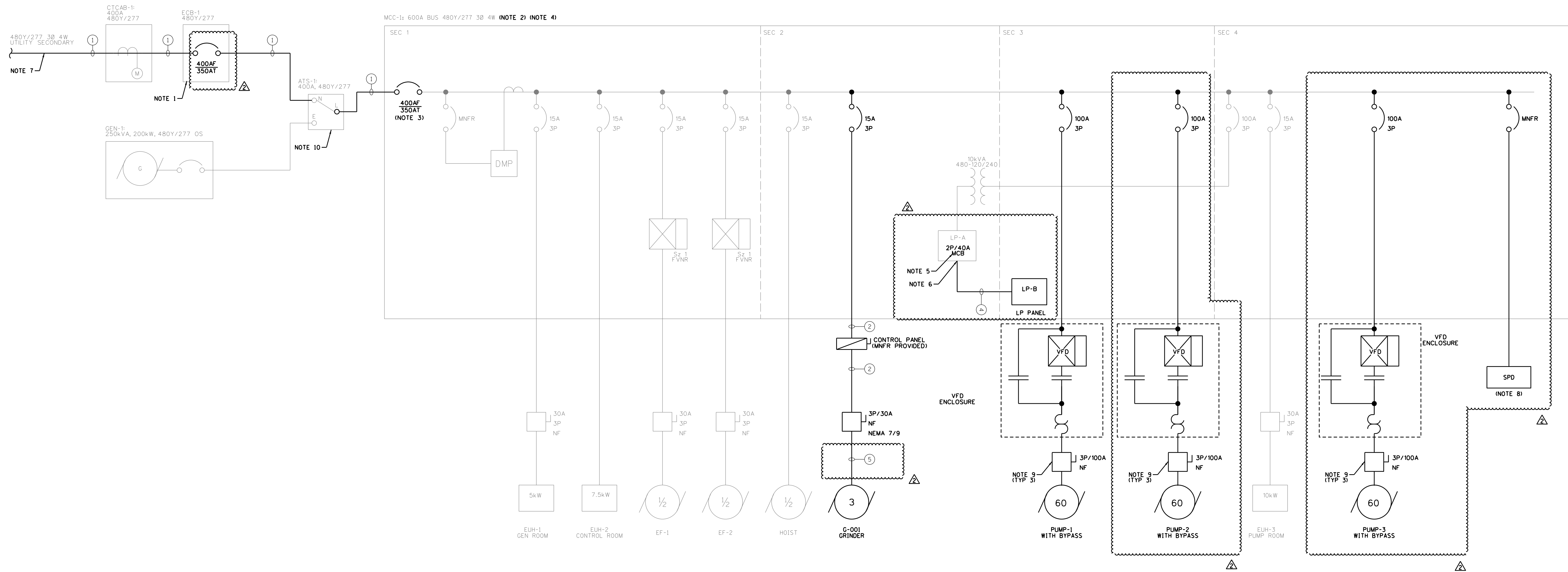
CLASSIFICATION TABLE	WET	CORROSIVE	HAZARDOUS LOCATION RATING		
			UNCLASSIFIED	CLASS 1 DIVISION 1 GROUPS C & D	CLASS 1 DIVISION 2 GROUPS C & D
UPPER LEVEL					
GENERATOR ROOM			X		
CONTROL ROOM			X		
LOWER LEVEL					
GRINDER AREA	X	X		X	
WET WELL	X	X		X	
PUMP ROOM	X				X

- NOTES:
- NEW MAGNETIC FLOW METER.
 - RELOCATE EXISTING LIGHT SWITCH TO OTHER SIDE OF DOOR IF NEEDED.
 - FOLLOW APPROPRIATE NEC INSTALLATION METHODS PER ROOM CLASSIFICATION.
 - SEE M.1 FOR FAN INTERLOCKING REQUIREMENTS.

DATE	REVISIONS	ISSUE	PROJECT STAFF
11/22/24		2.	APPENDIX #1
11/14/24		1.	ISSUED FOR BIDDING
			JULIAN KINS, P.E.
			DAVID BRONKHORST, S.E.
			JOHNNY ZATHE, E.L.T.
			TECHNICIANS: MIKE JAVISON
			TECHNICIANS: DANIEL BLAVET

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109201 Wisco Road, Suite D
St. Charles, IL 60175
Ph: 630-582-0470 • Fax: 630-582-0475

Braewood Pump Station Rehabilitation
Upper and Lower Level Electrical Plan
Algonquin, Kane County, Illinois



One-Line Diagram
N.T.S.

FEEDER SCHEDULE (NEW U.N.O):

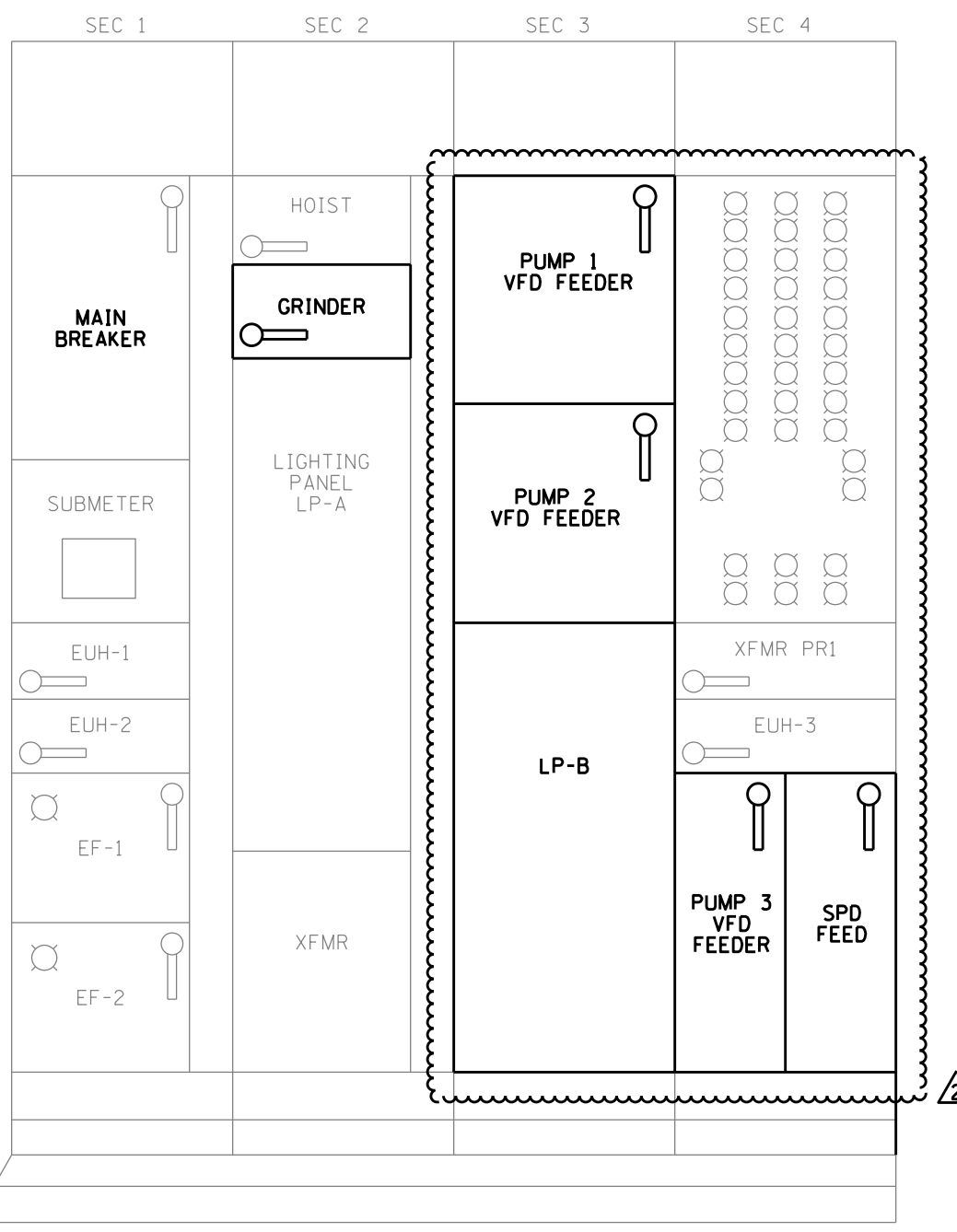
- 1) [4] *500MCM PH + [1] *3 EGC IN EX. 3" C
- 2) [3] *12 PH + [1] *12 EGC IN 3/4" C
- 3) [3] *1 PH + [1] *8 EGC IN 1-1/4" C
- 4) [3] *8 PH + [1] *10 EGC IN 3/4" C
- 5) MNFR CABLE

REFERENCED NOTES:

1. EXISTING ECB-1 CONTAINS A 400AF/300AT THERMAL MAG BREAKER, EATON PART NUMBER 'KD3300'. INSTALL NEW 'KD3350' 400AF/350AT BREAKER WITH 'FA350K' TERMINAL (QTY 6) IN EXISTING BREAKER ENCLOSURE. SET MAGNETIC DIALS PER UPDATED POWER STUDY.
2. THERE IS A DISCREPANCY BETWEEN NUMBER OF WIRES (3W OR 4W) BETWEEN LIFT STATION AS-BUILTS AND MCC-1 FACTORY SHOP DRAWINGS. THIS DRAWING SET ASSUMES 4W. FIELD-VERIFY IF THERE IS A NEUTRAL BUS PRESENT IN MCC-1 AND SUBMIT NEW BUCKETS ACCORDINGLY. CONFIRM WITH NOTE IN SUBMITTAL.
3. PROVIDE NEW 400AF/350AT MAIN CIRCUIT BREAKER IN EXISTING BUCKET. INSPECT LOAD SIDE CONNECTION HARDWARE FOR MECH/HEAT DAMAGE AND REPLACE AS NEEDED. SEE NOTE 4 FOR CONTACT. SET MAGNETIC DIALS PER UPDATED POWER STUDY.
4. MCC-1 MODS CONTACT: GEORGE LONG, GLONG@REVEREELECTRIC.COM, 312-528-2313.
5. INTEGRAL PANELBOARD IS 120/240V 1PH. REPLACE EXISTING 2P/30A MCB WITH 2P/40A.
6. ALL LP-A CIRCUITS ARE IN USE. CONTRACTOR TO REMOVE TWO CIRCUITS AND REPLACE WITH A NEW 2P/40A BREAKER TO FEED NEW EXTERNAL LP-B. THEN RE-FEED THE TWO REMOVED CIRCUITS OUT OF NEW PANEL LP-B. SEE SCHEDULE ON THIS SHEET FOR OTHER NEW LOADS IN LP-B. THIS DRAWING SET SHOWS CONTROL ROOM LIGHTS AND CONTROL ROOM RECEPTACLES AS THE TWO RE-FEED CIRCUITS. CONTRACTOR TO NOTIFY EOR SHOULD THEY WANT TO RE-FEED DIFFERENT TWO CIRCUITS (BASED ON FIELD CONDITIONS) SO THAT SCHEDULES CAN BE UPDATED. PROVIDE NEW TYPED DIRECTORY FOR INTEGRAL PANEL LP-A ON INSIDE OF MCC DOOR.
7. SEE SHEET C-1 FOR LOCATION OF UTILITY TRANSFORMER, COORDINATE WITH COMED ON NEW SECONDARY TERMINATIONS AND POTENTIALLY SWAPPING CT'S (DONUTS) INSIDE EXISTING CT CABINET.
8. SEE SPEC 26 43 13 FOR SPD REQUIREMENTS.
9. PROVIDE AUX CONTACT WITH DISCONNECT AND WIRE TO UPSTREAM VFD SUCH THAT VFD DISABLES UPON SWITCH OPENING. TYPICAL FOR [3] 100A HD DISCONNECTS.
10. EXISTING LUGS IN ATS-1 ARE UNVERIFIED. PROVIDE NEW LUGS TO ACCEPT SINGLE 500'S AS NEEDED ON NORMAL-SIDE AND LOAD-SIDE.

GENERAL NOTES:

- G1. SEE SHEET D.5 FOR ELECTRICAL DEMOLITION ONE-LINE AND DEMOLITION MCC ELEVATION.
- G2. RETRIEVE LIFT STATION POWER STUDY AND COORDINATE WITH PSS ENGINEER ON INCORPORATING UPSIZED LOADS AND NEW FEEDERS. SUBMIT UPDATED STUDY UNDER SPEC 26 05 73. SEE SPEC FOR FULL REQUIREMENTS.



MCC-1 Elevation
N.T.S.

BRANCH PANEL NAME	TAG	VOLTAGE	BUS SIZE			MAIN OCP			
LIFT STATION LP PANEL #2	LP-B	120/240 1PH 3W	100A			MLO			
FED FROM: LP-A									
IC: 10KAIC									
LOAD	BREAKER			BREAKER			LOAD		
	POLE	TRIP	CKT	CKT	TRIP	POLE			
CONTROL ROOM LIGHTS	1	2Ø	1	0.12	1.26	2	2Ø	1	CONTROL ROOM RECEPTACLES
CU-1Ø1	2	2Ø	3	1.08	1.08	4	2Ø	1	CU-1Ø2
			5	1.08	1.08	6	2Ø	2Ø	
OCU-1Ø1	2	2Ø	7	0.50		8	2Ø	1	SPARE
			9		0.5	10	2Ø	1	SPARE
SPACE	1	2Ø	11			12	2Ø	1	SPACE
CONNECTED LOAD PER PHASE (kVA)				2.78	3.92				

PROJECT STAFF	ENGINEER: JILLIAN R. FLE PROJECT MANAGER: JENNIFER L. ELLIOTT PROJECT SUPERVISOR: JENNIFER L. ELLIOTT DESIGNER: JENNIFER L. ELLIOTT CHECKER: JENNIFER L. ELLIOTT DATE: 11/22/24
REVISIONS	1. ISSUED FOR BIDDING 2.
 TROTTER ASSOCIATES, INC. CONSULTING ENGINEERS 40500 W. Wood Road, Suite D St. Charles, IL 60175 Ph: 630-587-4700 • Fax: 630-587-4715	
Braewood Pump Station Rehabilitation Electrical Single-Line and MCC Elevation Algonquin, Kane County, Illinois	
Project No.:	ALG037
Plot Date:	11/22/2024
Scale:	N.T.S.
Sheet Number	E.3