

SAW MILL PUMP STATION UPGRADES

VILLAGE / TOWN OF MT. KISCO WESTCHESTER COUNTY NEW YORK



LOCATION MAP
SCALE: N.T.S.

JANUARY 2022

PREPARED BY:



28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
8-12 DIETZ STREET, SUITE 303, ONEONTA, NY 13820 - 607.432.8073
31 NORTH MAIN STREET, LIBERTY, NY 12754 - (845) 747-9952
6 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
16 EAST MARKET STREET, RED HOOK, NY 12571 - 518.452.1290

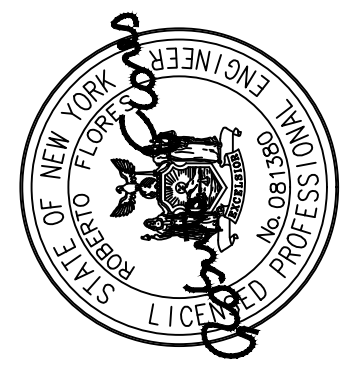
VILLAGE BOARD OF TRUSTEES:

GINA D. PICINICH -- MAYOR
LISA C. ABZUN -- DEPUTY MAYOR
ANNE BIANCHI -- TRUSTEE
KARINE PATIÑO -- TRUSTEE
KAREN B. SCHLEIMER -- TRUSTEE

ED BRANCATI -- VILLAGE MANAGER
JOE LUPPINO -- GENERAL FOREMAN

DATE:	01/22
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SCALE:	NTS
REVIEWED BY:	PM
PROJECT NO.:	19-1843
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DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
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548 BROADWAY, MONTICELLO, NY 12770 - 845.791.7777



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NO.	DESCRIPTION

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

COVER

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COVER

BID PLANS

File: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SHPS_PUMP_STATION_REV1_20201224.DWG Printed: 2/10/2022 3:36:34 PM User: Kyle Muller lastSavedBy: mullerk

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL EXAMINE AND VERIFY, IN THE FIELD, ALL CONDITIONS AND DIMENSIONS. DIMENSIONS OF THE EXISTING STRUCTURES SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL CONSTRUCTION OR SUBSEQUENT REHABILITATION DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL SUCH FIELD MEASUREMENTS TO ASSURE PROPER FIT OF THE FINISHED WORK, AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. IF FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL USE THE FIELD CONDITIONS AND DIMENSIONS AND MAKE THE APPROPRIATE CHANGES TO THOSE SHOWN ON THE PLANS, AS APPROVED BY THE ENGINEER. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS MADE SHALL BE INDICATED ON THE SHOP DRAWINGS SUBMITTED FOR REFERENCE OF THE REVIEWER.
2. THERE SHALL BE NO CLAIM AGAINST THE OWNER MADE BY THE CONTRACTOR FOR WORK PERTAINING TO MODIFICATIONS, AS MAY BE REQUIRED, DUE TO ANY DIFFERENCE BETWEEN ACTUAL FIELD CONDITIONS AND THOSE SHOWN BY THE DETAILS AND DIMENSIONS ON THE CONTRACT PLANS. THE CONTRACTOR WILL BE PAID AT A LUMP SUM OR THE UNIT BID PRICE FOR THE ACTUAL QUANTITIES OF MATERIALS USED OR FOR THE WORK PERFORMED, AS INDICATED BY THE VARIOUS ITEMS IN THE CONTRACT. THE CONTRACTOR SHOULD NOTE THAT ADDITIONAL WORK MAY BE REQUIRED AS THE CONTRACT PROGRESSES, WHICH IS NOT SHOWN OR NOTED ON THE PLANS. THIS WORK SHALL BE PERFORMED BY THE CONTRACTOR, AS ORDERED BY THE ENGINEER, AND PAYMENT SHALL BE MADE AT THE BID PRICE FOR THE APPROPRIATE ITEMS. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT, DUE TO THE NATURE OF REPLACEMENT PROJECTS, THE EXACT EXTENT OF REPLACEMENT WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO THE COMMENCEMENT OF WORK. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS AND WORK QUANTITIES. THE CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH FIELD CONDITIONS.
3. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING STRUCTURES CAUSED BY HIS OPERATIONS WHICH IS NOT INCLUDED AS PART OF THIS WORK. ALL DAMAGE TO THE EXISTING STRUCTURES WHICH IS NOT PART OF THE INTENDED WORK SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT COST TO THE OWNER, AND TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL CONDUCT HIS REMOVAL OPERATIONS TO THE SATISFACTION OF THE ENGINEER SO AS NOT TO UNDULY DISTURB UNDERLYING MATERIALS WHICH ARE TO REMAIN IN PLACE. THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE OWNER, THE DAMAGED MATERIAL SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
4. WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED, THE COST OF SUPPLYING A LEGAL DISPOSAL AREA AND TRANSPORTATION TO THE AREA SHALL BE INCLUDED IN THE PRICE BID.
5. THE CONTRACTOR IS STRONGLY SUGGESTED TO VISIT THE SITE BEFORE BIDDING, TO BECOME FAMILIAR WITH THE FIELD CONDITIONS AND TO JUDGE THE EXTENT AND NATURE OF THE WORK TO BE DONE UNDER THIS CONTRACT. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR BECAUSE OF THE CONTRACTOR'S FAILURE TO INCLUDE IN THEIR BID ALL ITEMS AND MATERIALS WHICH THEY ARE REQUIRED TO FURNISH IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. ALL WORK AREAS AT THE SITE SHALL BE COMPLETELY SECURED, CONFORMING WITH OSHA REGULATIONS, TO THE SATISFACTION OF THE ENGINEER, TO PROTECT THE PUBLIC AND PREVENT UNAUTHORIZED ENTRY. THE COST OF THIS WORK IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
7. IT WILL BE THE CONTRACTOR'S OBLIGATION AND RESPONSIBILITY TO USE METHODS AND EQUIPMENT WHICH WILL INSURE THE SATISFACTORY COMPLETION OF THE REQUIRED WORK WITHIN THE TIME FRAME STIPULATED IN THE CONTRACT.
8. THE CONTRACTOR SHALL PROVIDE SURVEY AND STAKE OUT FOR THIS PROJECT. THE COST FOR THE SURVEY AND STAKE OUT SHALL BE INCLUDED IN THE UNIT PRICES BID FOR VARIOUS ITEMS OF THE CONTRACT REQUIRING SURVEY AND STAKEOUT.
9. LOCATION OF UTILITIES, PUBLIC AND/OR PRIVATE, INDICATED AS EXISTING AND/OR TO BE CONSTRUCTED AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THEIR EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. ADDITIONAL UTILITY LINES, WHETHER ABANDONED OR IN SERVICE, MAY EXIST AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OPERATIONS AND TAKE THE NECESSARY PRECAUTIONS TO PREVENT INTERFERENCE WITH, OR DAMAGE TO, THESE OR OTHER FACILITIES DURING THE COURSE OF CONSTRUCTION. CONTRACTOR SHALL HIRE LOCATING COMPANY TO PROVIDE LOCATE AND MARKOUT ON PRIVATE PROPERTY AT NO ADDITIONAL COST TO OWNER.
10. IN THE EVENT THE CONTRACTOR DAMAGES AN EXISTING UTILITY SERVICE CAUSING AN INTERRUPTION IN SAID SERVICE, THEY SHALL IMMEDIATELY COMMENCE WORK TO RESTORE SERVICE AND MAY NOT CEASE THE WORK OPERATION UNTIL SERVICE IS RESTORED.
11. THE CONTRACTOR SHALL CALL 811--DIG SAFELY NEW YORK (DSNY) (1-800-962-7962) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED IN THE FIELD. CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL UTILITY LOCATIONS THROUGHOUT PROJECT.
12. AREAS DISTURBED BY THE CONTRACTOR AS PART OF THE WORK TO BE PERFORMED UNDER THIS CONTRACT, SHALL BE RESTORED TO PRECONSTRUCTION STANDARDS AND TO THE SATISFACTION OF THE ENGINEER. ALL THE DISTURBED GRASS AREAS SHALL BE GRADED AND SEEDED IN A MANNER APPROVED BY THE ENGINEER.
13. AS-BUILT DRAWINGS: DURING THE DAILY PROGRESS OF WORK, THE CONTRACTOR'S JOB SUPERINTENDENT SHALL RECORD ON THE FIELD SET OF DRAWINGS ALL WORK INSTALLED. ALL PIPING, VALVES, FITTINGS, FIRE HYDRANTS, ETC. SHALL BE LOCATED IN TWO DIRECTIONS. ONE LOCATION SHALL BE REFERENCED PERPENDICULAR TO THE RIGHT OF WAY LINES AND/OR PROPERTY LINES (PREFERABLY BOTH). SIZE, TYPE, AND CLASS OF PIPING, VALVES, FITTINGS, FIRE HYDRANTS, ETC. SHALL BE SHOWN (I.E. 8" CL 52 D.I.P., 6" GATE VALVE). ALL LOCATIONS WHERE THE TOP OF THE PIPING IS LESS THAN 60" DEEP OR MORE THAN 96" DEEP SHALL BE NOTED ON THE AS-BUILTS.
14. CLEAN-UP: ALL SURPLUS MATERIALS OF CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR AS PART OF THE CONTRACT WITH THE OWNER. THERE SHALL BE NO ADDITIONAL PAYMENT FOR THIS WORK.
15. PERMITS: THE CONTRACTOR SHALL OBTAIN ANY NYSDOT PERMITS.
16. DEWATERING: THE CONTRACTOR SHALL AT ALL TIMES DURING CONSTRUCTION PROVIDE AMPLE MEANS AND EQUIPMENT WITH WHICH TO PROMPTLY REMOVE AND DISPOSE OF ALL WATER ENTERING THE TRENCH AND STRUCTURE EXCAVATIONS AND SHALL KEEP SAID EXCAVATIONS ACCEPTABLY DRY, UNTIL THE PIPING AND/OR STRUCTURES TO BE BUILT THEREIN ARE COMPLETED. ALL WATER PUMPED OR DRAINED FROM THE WORK AREA SHALL BE DISPOSED OF IN A MANNER AS TO NOT DAMAGE SEWER, WATER, ELECTRICAL OR ANY OTHER PIPING STRUCTURES OR PROPERTY. NO PIPE SHALL BE LAID IN WATER AND NO WATER SHALL BE ALLOWED TO RISE ABOVE THE BOTTOM OF ANY PIPE WHILE IT IS BEING JOINTED. DEWATERING WITH UP TO A 4" PUMP SHALL BE INCLUDED IN THE CONTRACT PRICE. ADDITIONAL COMPENSATION FOR DEWATERING THAT REQUIRES LARGER PUMPS, WELLPOINTS, OR OTHER METHODS SHALL BE APPROVED BY THE ENGINEER AND THE OWNER PRIOR TO INSTALLATION.
17. CONCRETE: ALL PORTLAND CEMENT CONCRETE MIXES SHALL BE APPROVED IN ADVANCE BY THE ENGINEER. ALL CONCRETE SHALL BE PLACED BEFORE THE INITIAL SET HAS TAKEN PLACE. STALE OR RETEMPERED CONCRETE SHALL NOT BE USED. CONCRETE USED FOR PIPE PLUGS AND BENCHING SHALL BE 3000 PSI MINIMUM. CONCRETE USED FOR ALL OTHER PURPOSES SHALL BE 4000 PSI MINIMUM.
18. JOBSITE SAFETY: WHILE ON THE JOBSITE, THE CONTRACTOR SHALL AT ALL TIMES OBSERVE ALL FEDERAL, STATE, AND LOCAL SAFETY RULES, REGULATIONS AND LAWS. JOBSITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
19. PRECONSTRUCTION SURVEY OF EXISTING STRUCTURES ARE TO BE PERFORMED, RECORDED, AND PROVIDED TO THE ENGINEER PRIOR TO ANY AND ALL WORK COMMENCING. PRECONSTRUCTION SURVEY SHALL BE DETAILED TO INCLUDE ALL VISIBLE ASPECTS OF STRUCTURES, HARDSCAPES, LANDSCAPES, UTILITIES, RAILROAD INFRASTRUCTURE, AND GENERAL CONDITION OF ALL ITEMS WITHIN THE PROJECT LIMITS. SURVEY IS TO INCLUDE PHOTOGRAPHS AND VIDEO WITH NARRATIVES EXPLAINING WHAT IS BEING CAPTURED. BY ALL DEPICTIONS, PAYMENT FOR THIS SURVEY WILL BE INCLUDED WITHIN THE MOBILIZATION ITEM.

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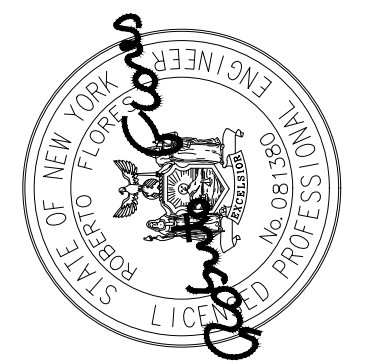
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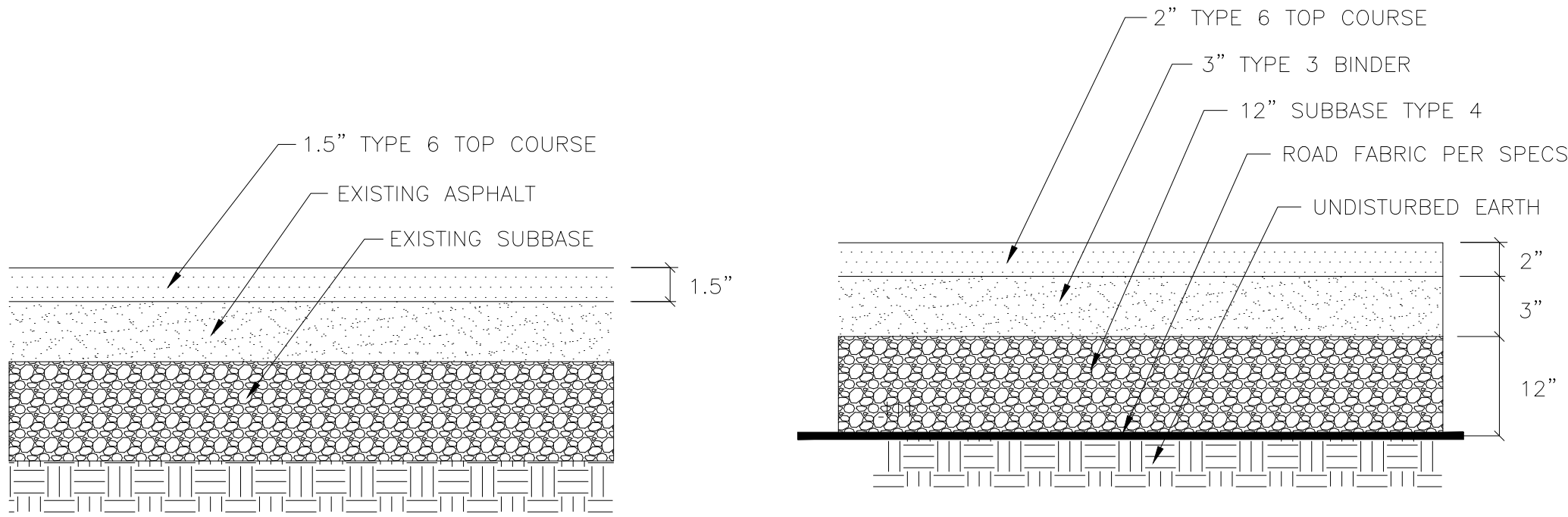


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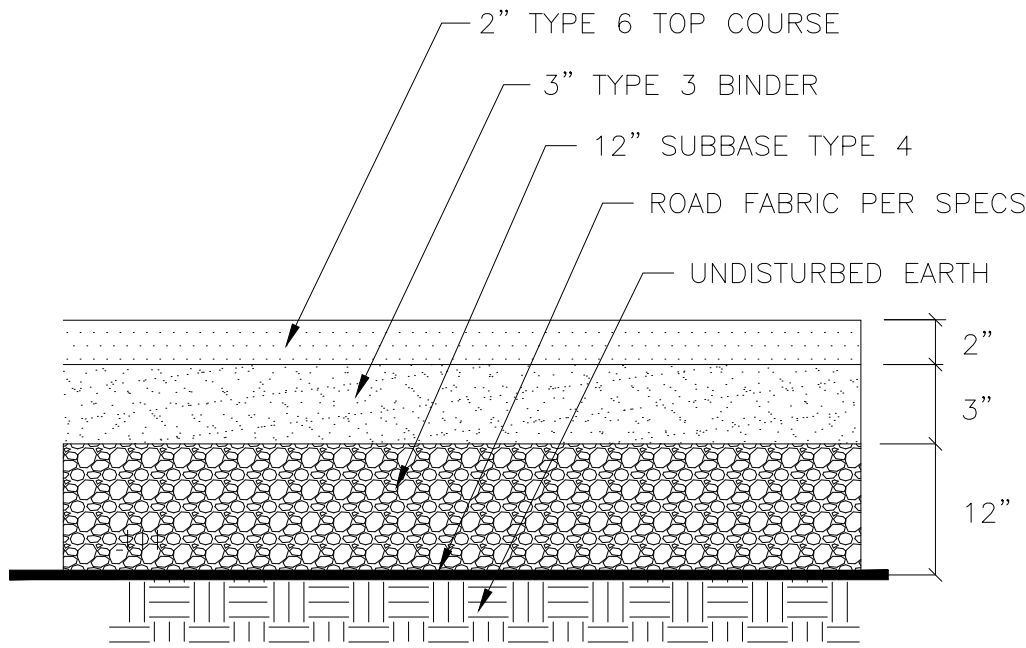
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

GENERAL NOTES & INDEX

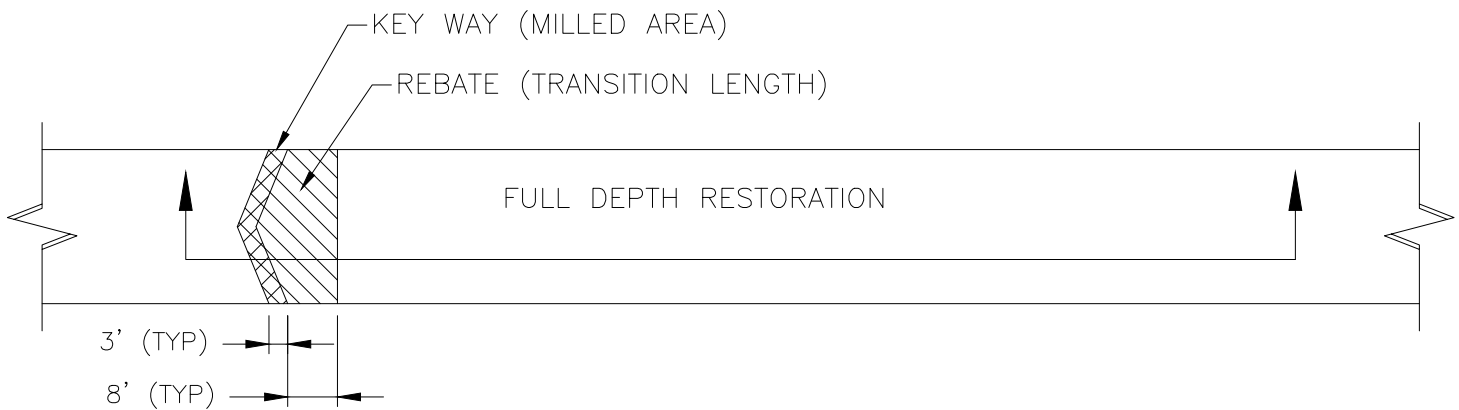
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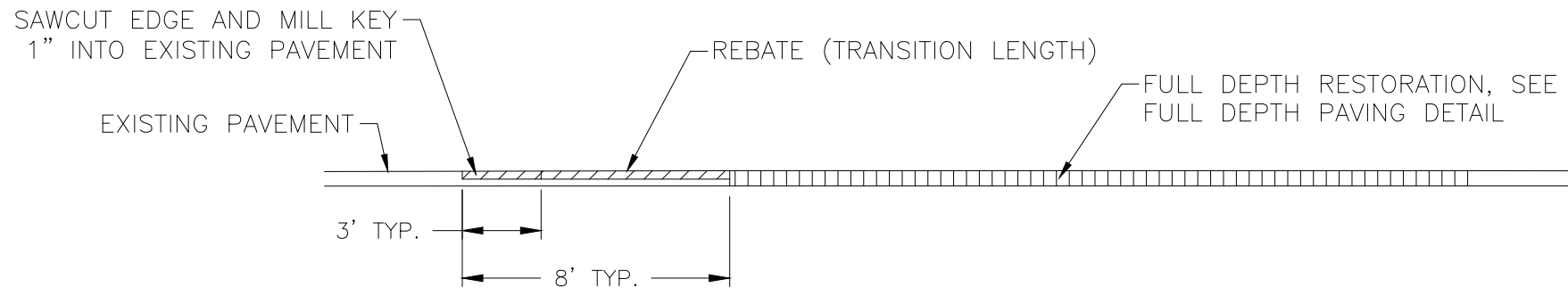
1.5" OVERLAY DETAIL
SCALE: NTS



FULL DEPTH PAVING DETAIL
SCALE: NTS

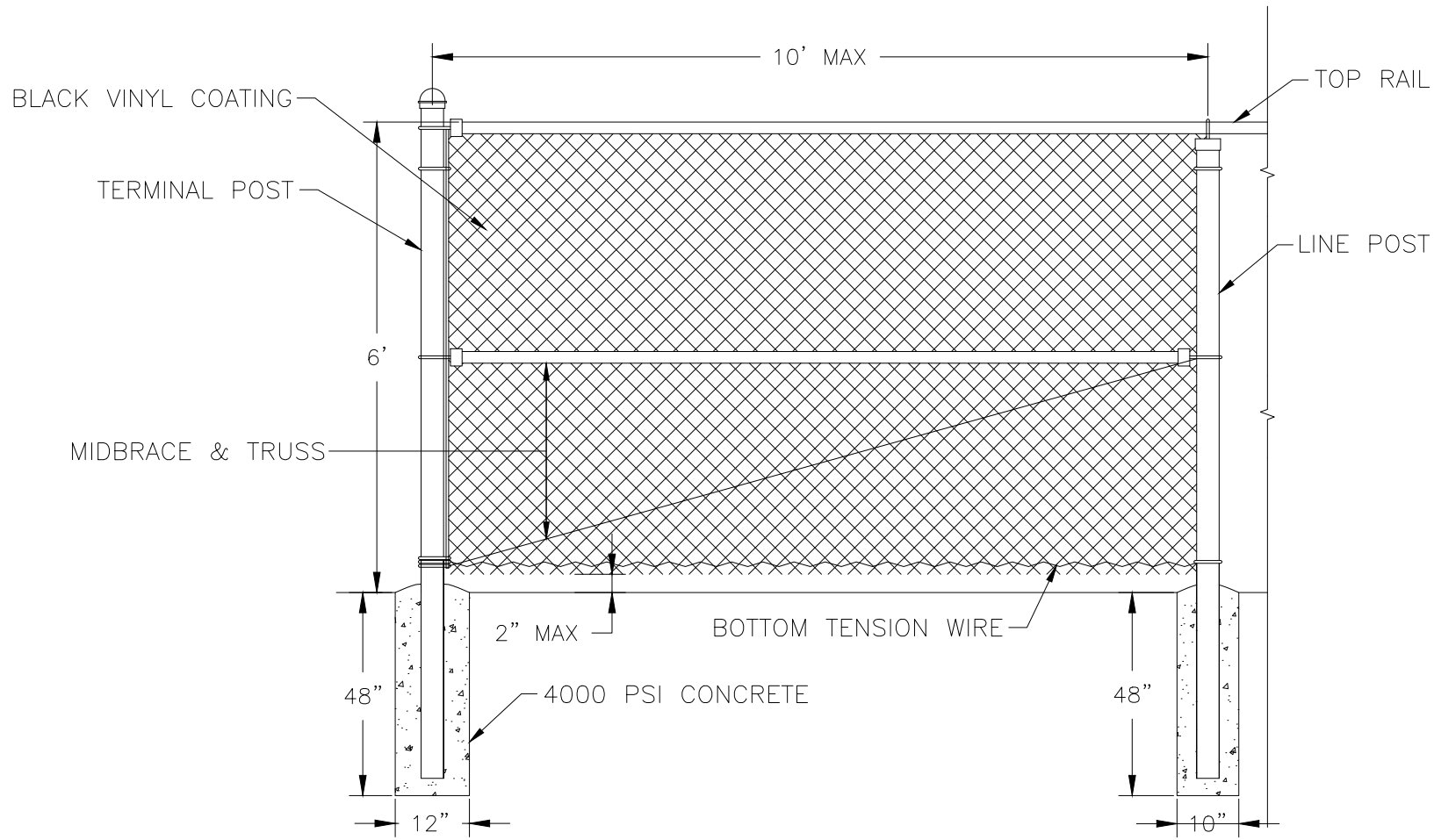


TYPICAL PAVEMENT RESTORATION WITH REBATE
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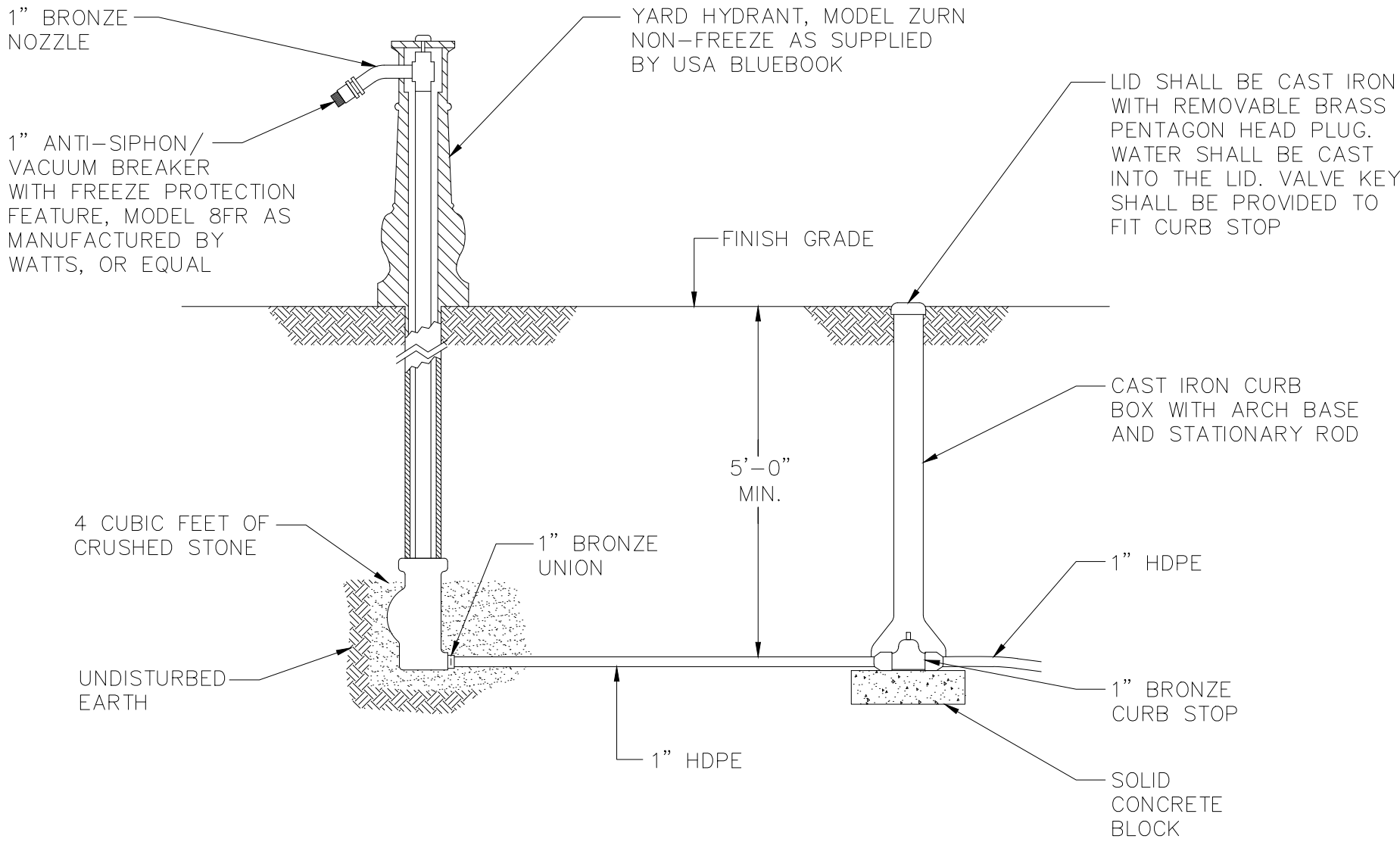


TYPICAL SECTION FOR PAVEMENT RESTORATION WITH REBATE
SCALE: NTS

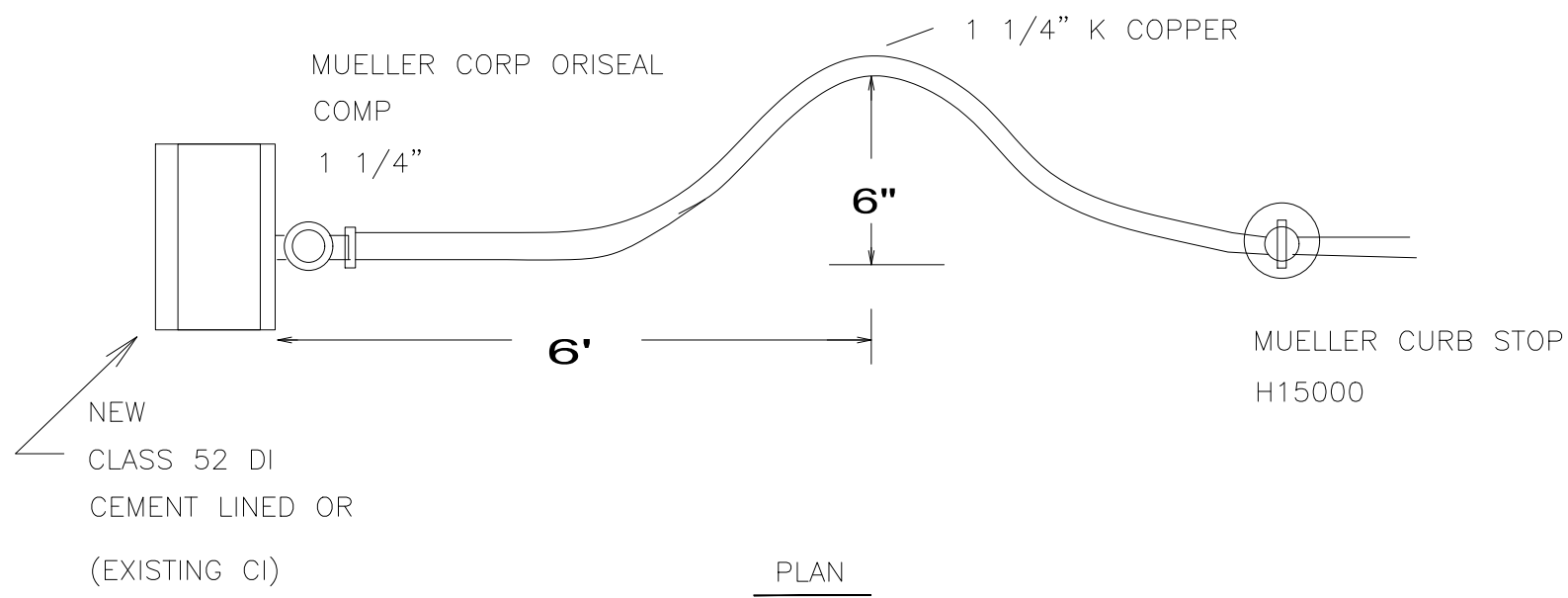
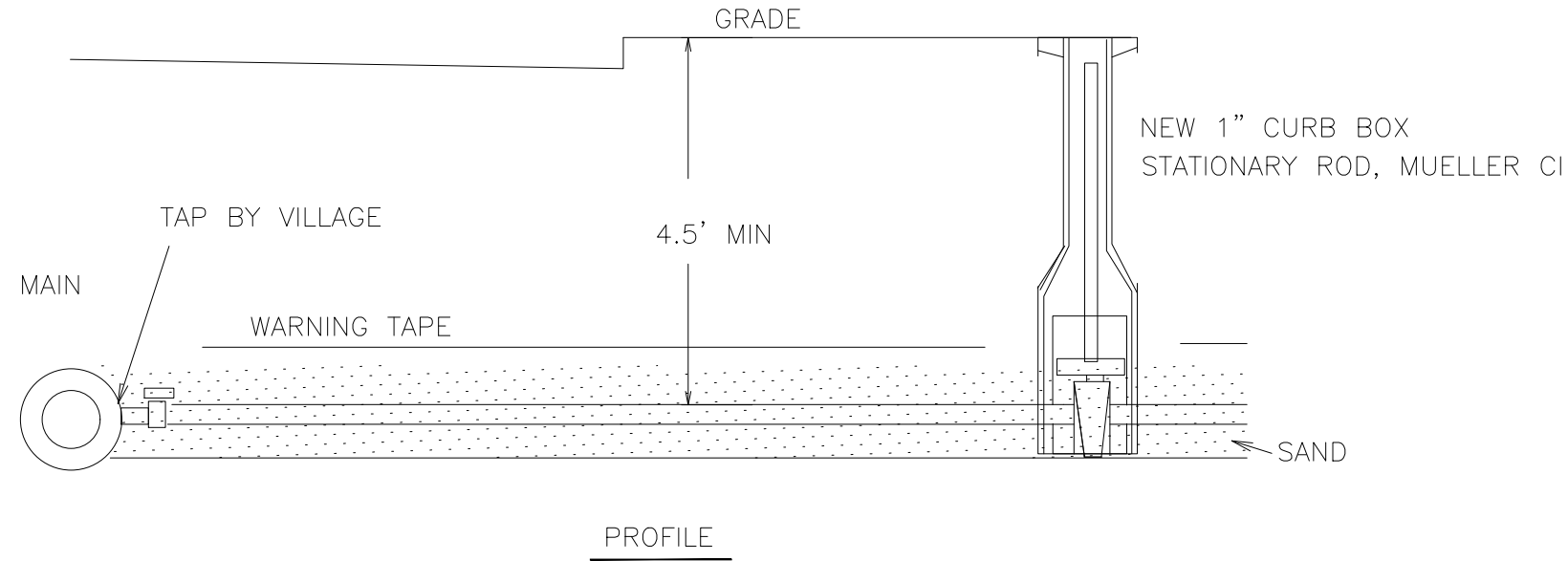
- NOTES:
1. ALL SURFACES OF THE TRANSITION AREA SHALL BE CLEANED AND TACK COATED PRIOR TO ASPHALT PLACEMENT. THE COST OF SAWCUTTING, MILLING REBATES, TACK COAT AND CLEANING PAVEMENT IN THE TRANSITION AREA SHALL BE INCLUDED IN THE BID.
 2. TRUE & LEVEL COURSE SHALL BE USED ABOVE.
 3. SAW CUTS SHALL BE MADE SO THAT SURFACE RUNOFF IS DIRECTED TO THE EDGE OF PAVEMENT.



TYPICAL PVC COATED CHAIN LINK FENCE DETAIL
SCALE: NTS



TYP YARD HYDRANT DETAIL
SCALE: NTS



NEW WATER SERVICE DETAILS
SCALE: NTS

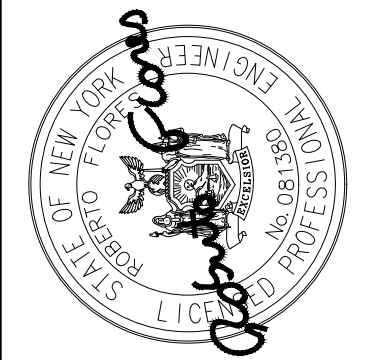
- NOTE:
- THE VILLAGE WILL SUPPLY AND INSTALL THE CORPORATION STOP AND CURBSTOP.
- THE CONTRACTOR IS RESPONSIBLE FOR DIGGING, DISPOSAL OF MATERIAL, PIPING INSTALLATION, EMBEDMENT MATERIAL, AND TESTING.

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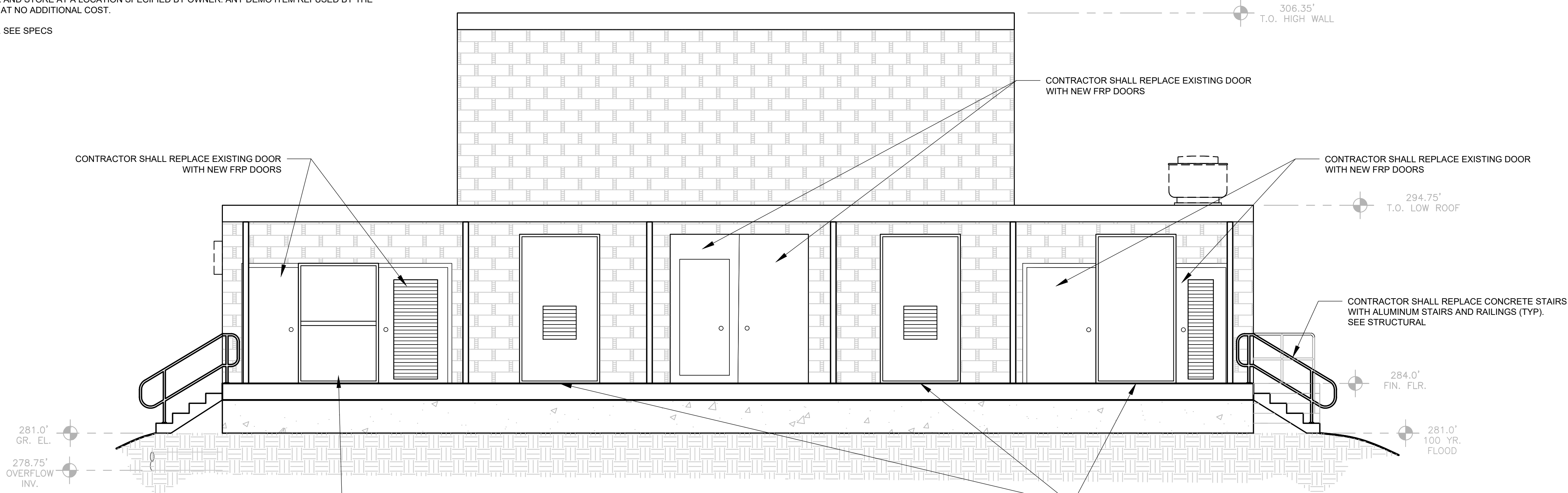
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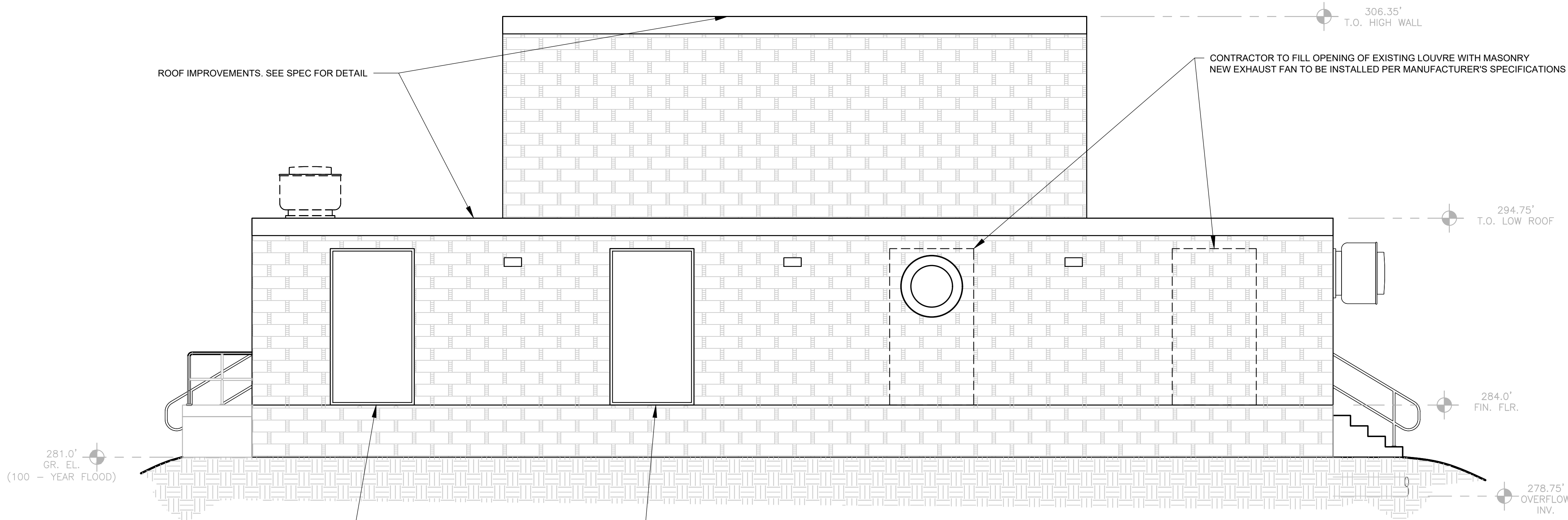
TYPICAL SITE DETAILS

NOTES:

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2. SALVAGE ALL MATERIALS FOR OWNER AND STORE AT A LOCATION SPECIFIED BY OWNER. ANY DEMO ITEM REFUSED BY THE OWNER SHALL BE DISPOSED OFFSITE AT NO ADDITIONAL COST.
3. ALTERNATE 1 - ROOF IMPROVEMENTS. SEE SPECS



1
101 PUMP STATION NORTH ELEVATION
SCALE: 1/4"=1'-0"

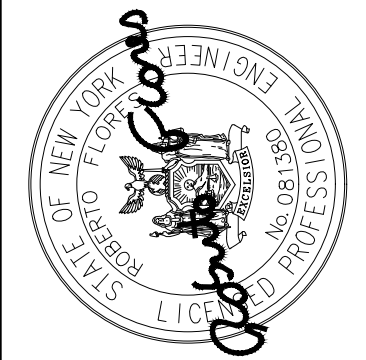


2
101 PUMP STATION SOUTH ELEVATION
SCALE: 1/4"=1'-0"

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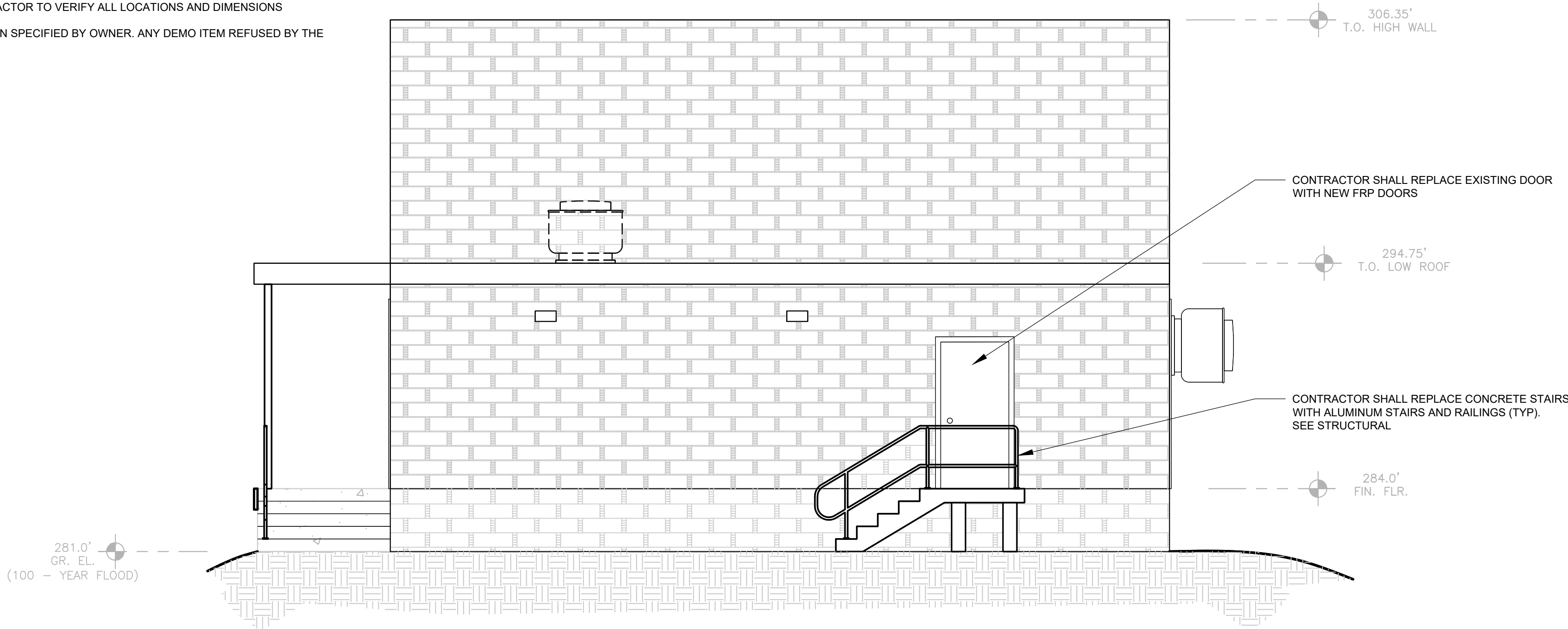
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PUMP STATION
ELEVATIONS

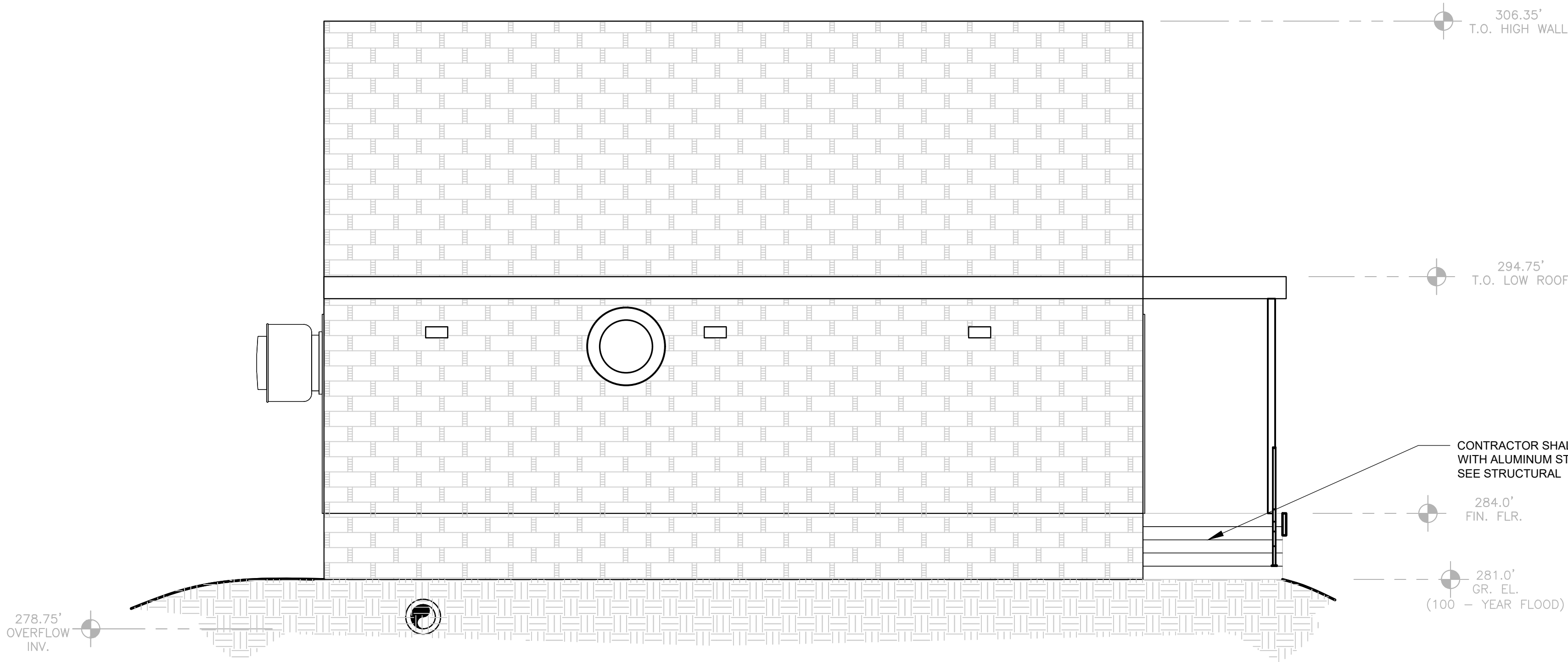
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A-101

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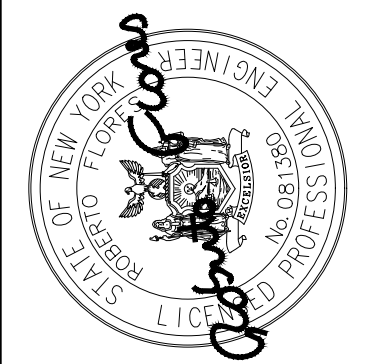
3 PUMP STATION WEST ELEVATION
SCALE: 1/4"=1'-0"



4 PUMP STATION EAST ELEVATION
SCALE: 1/4"=1'-0"

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VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

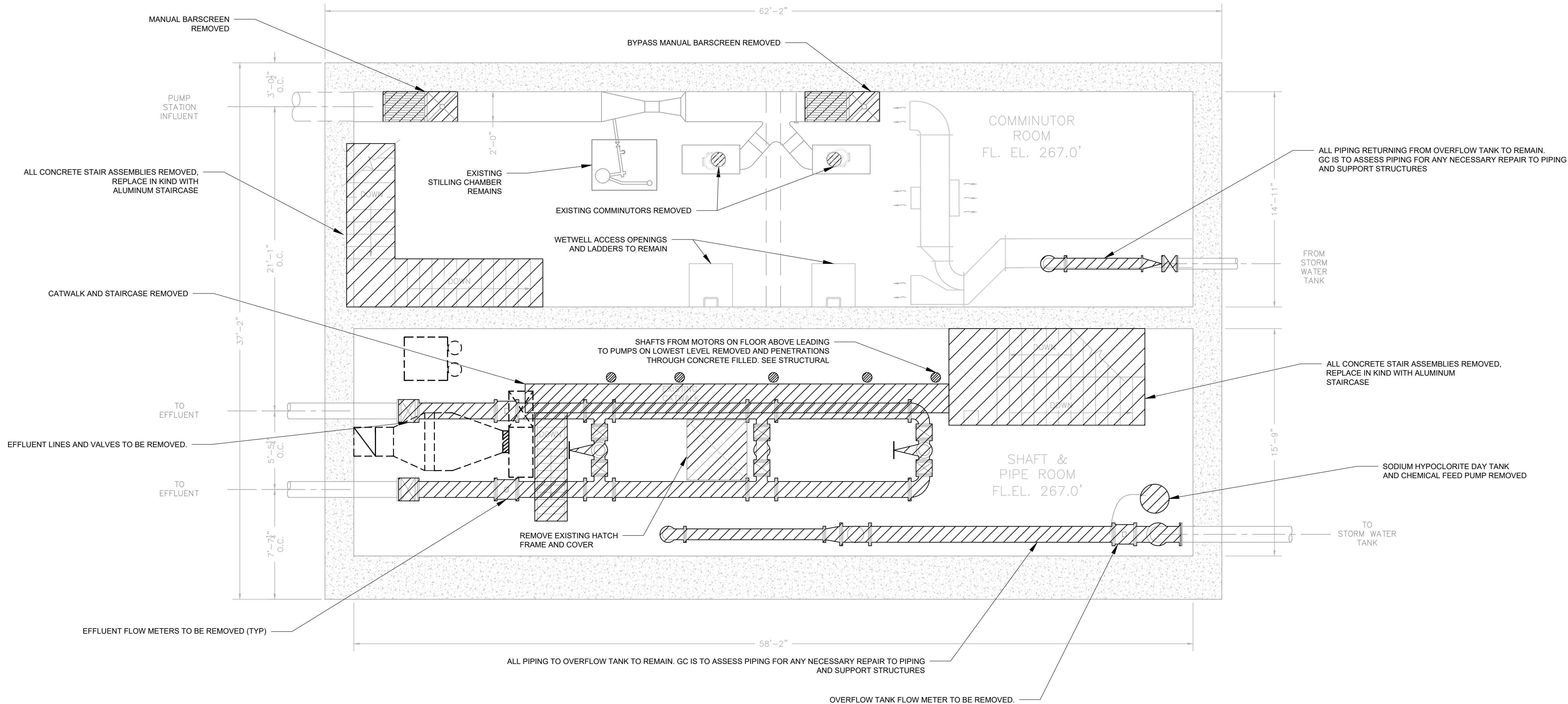
PUMP STATION
ELEVATIONS

SHEET:

A-102

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FILE: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SHIPS_PUMP_STATION_REV1_20201224.DWG Sheet: 2/10/2022 3:34:22 PM Plotted: 2/10/2022 3:38:37 PM User: Kyle Muller catSaveBy: mullerx



NOTES:

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2. SALVAGE ALL METALS FOR OWNER AND STORE AT A LOCATION SPECIFIED BY OWNER. ANY DEMO ITEM REFUSED BY OWNER SHALL BE DISPOSED OF OFFSITE AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN PUMP STATION OPERATIONS.

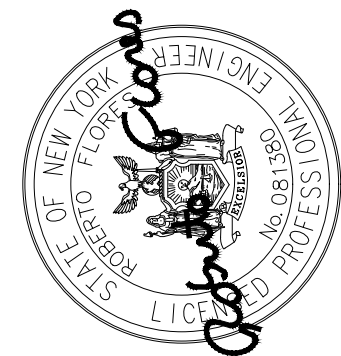
BID PLANS

SHEET:

PUMP STATION
INTERMEDIATE FLOOR
DEMO PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		DESCRIPTION
NO.	DATE	





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CIVIL AND ENVIRONMENTAL ENGINEERING

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55 SOUTH MAIN STREET, ONEONTA, NY 13920 - 607.432.8073

1000 W. STATE STREET, ALBANY, NY 12206 - 518.452.1290

8 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235

16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290

548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22

DRAWN BY: MULLERK

SCALE: 1/4" = 1'-0"

REVIEWED BY: PFM

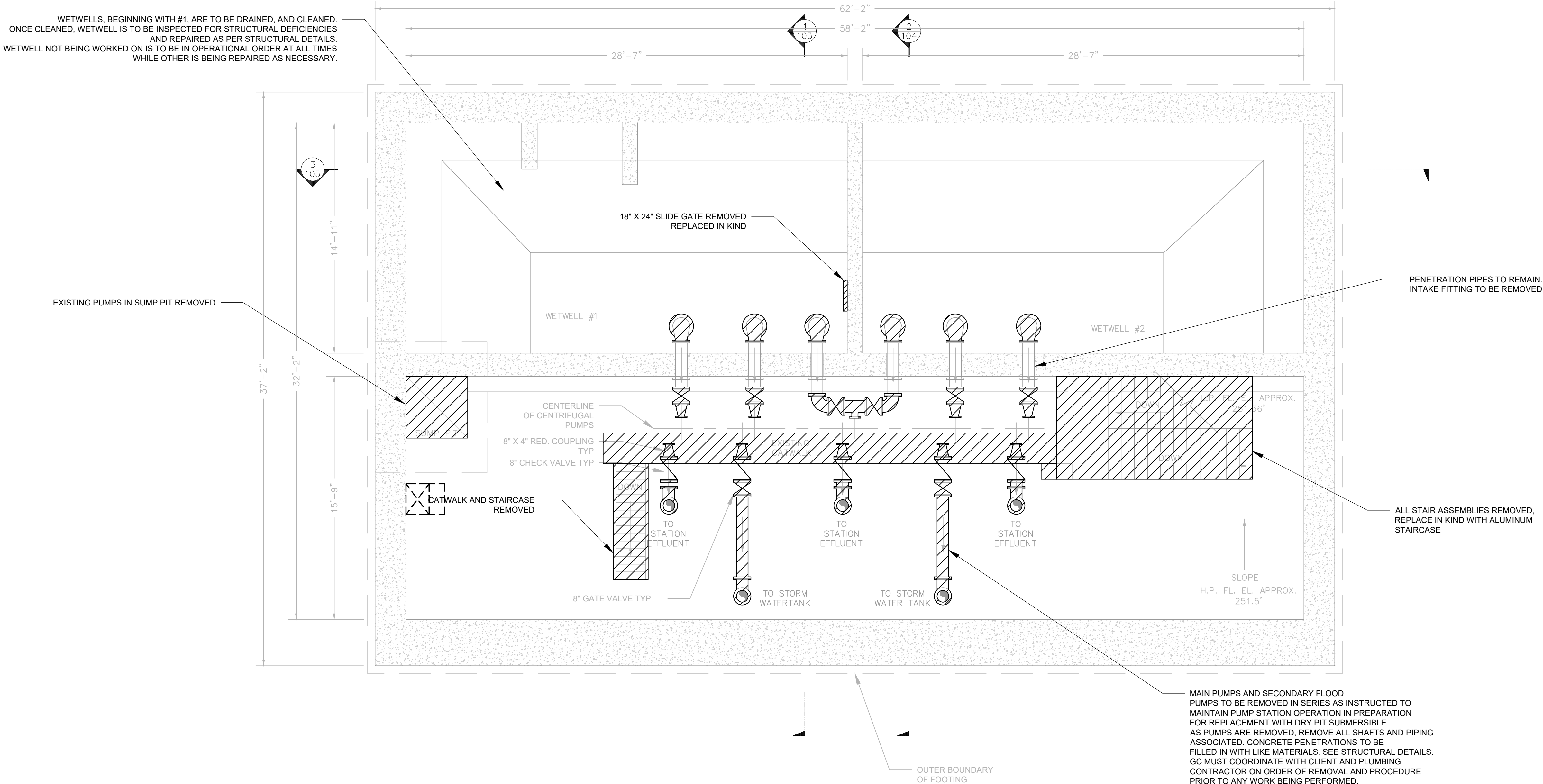
PROJECT NO.: 19-1843

FILE: SHIPS_PUMP_STATION_REV1_20201224.DWG

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A-104

File: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SHPS_PUMP_STATION_REV1_20201224.DWG Sheet: 2/10/2022 3:34:22 PM Plotted: 2/10/2022 3:36:38 PM User: Kyle Muller CreatedBy: mullerk



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3. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN PUMP STATION OPERATIONS.

BID PLANS

SHEET:

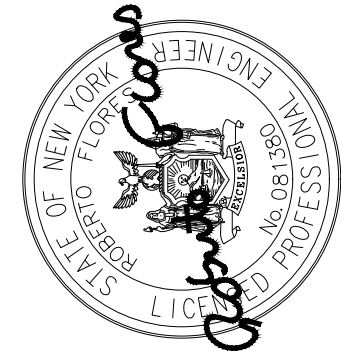
A-105

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
LOWER FLOOR
DEMO PLAN

REVISIONS

NO.	DATE	DESCRIPTION



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1110 WEST 10TH STREET, ALBANY, NY 12206 - 518.452.1290
8 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12001 - 845.791.7777

DATE: 01/22

DRAWN BY: MULLERK

SCALE: 1/4" = 1'-0"

REVIEWED BY: PFM

PROJECT NO.: 19-1843

FILE: SHPS_PUMP_STATION_REV1_20201224.DWG

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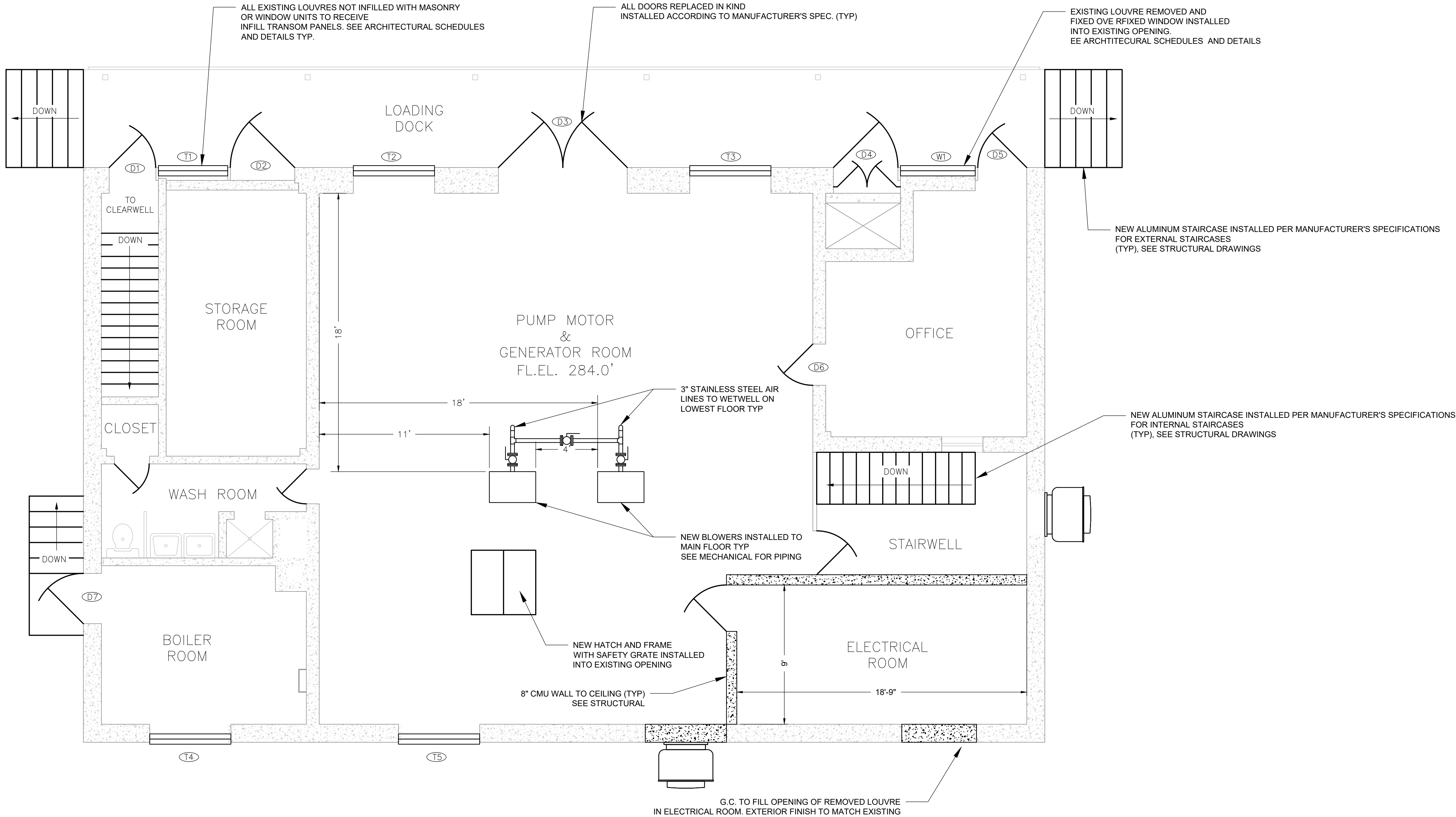
PUMP DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM) at TDH (Ft.)	ELECTRICAL REQUIREMENTS
EFFLUENT PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #2	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #3	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #4	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
STORM PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
STORM PUMP #2	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
SUMP PUMP #1	N/A	5	N/A	N/A	460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A	460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz
WETWELL BLOWER #2	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz

GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
WETWELL GRINDER #1	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz
WETWELL GRINDER #2	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz

NOTES:

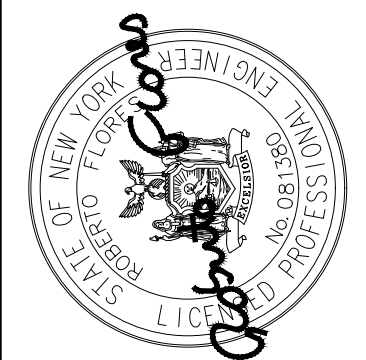
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DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: PFM
PROJECT NO.: 19-1843
FILE: SAW MILL PUMP STATION_REV_20201224.DWG

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1000 W. STATE STREET, ALBANY, NY 12206 - 607.422.8073
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REVISIONS		DESCRIPTION
NO.	DATE	

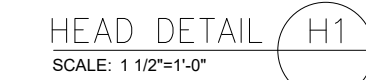
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
PROPOSED FIRST FLOOR
ARCHITECTURAL PLAN

SHEET:

A-106

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WINDOW AND TRANSOM SCHEDULE																	
WINDOW / TRANSOM NUMBER	DOORS							FRAME					FIRE RATING	HARDWARE	REMARKS		
	CONTRACTOR TO FIELD VERIFY ALL PANEL AND WINDOW OPENINGS PRIOR TO ORDERING.																
	TO		FROM		SIZE	THICK.	TYPE	MAT.	TYPE	MAT.	JAMB DETAIL	HEAD DETAIL					
	ROOM NO.	NAME	ROOM NO.	NAME	W X H												
W1	—	OFFICE	—	EXTERIOR	4'-10" X 7'-3"	1 3/4"	A	ALUM	A	ALUM	—	—	—	—	FIXED WINDOW OVER FIXED WINDOW	THERMALLY BROKEN	
T1	—	STORAGE	—	EXTERIOR	4'-10" X 9'-0"	8"	A	ALUM	A	ALUM	—	—	—	—	METAL FINISHED TRANSOM	INSULATED / THERMALLY BROKEN	
T2	—	PUMP MOTOR/GENER	—	EXTERIOR	4'-10" X 9'-0"	8"	A	ALUM	A	ALUM	—	—	—	—	METAL FINISHED TRANSOM	INSULATED / THERMALLY BROKEN	
T3	—	PUMP MOTOR/GENER	—	EXTERIOR	4'-10" X 9'-0"	8"	A	ALUM	A	ALUM	—	—	—	—	METAL FINISHED TRANSOM	INSULATED / THERMALLY BROKEN	
T4	—	BOILER	—	EXTERIOR	4'-10" X 9'-0"	8"	A	ALUM	A	ALUM	—	—	—	—	METAL FINISHED TRANSOM	INSULATED / THERMALLY BROKEN	
T5	—	PUMP MOTOR/GENER	—	EXTERIOR	4'-10" X 9'-0"	8"	A	ALUM	A	ALUM	—	—	—	—	METAL FINISHED TRANSOM	INSULATED / THERMALLY BROKEN	

HARDWARE SCHEDULE		
LIST OF MANUFACTURERS HINGES - STANLEY WORKS CLOSERS - NORTON		
LOCKS & LATCHES - SARGENT DOOR STOPS - GLYNN JOHNSON		
EXIT DEVICES - VON-DUPRIN FLUSH BOLTS - SARGENT		
GROUP 1 (1) PAIR BUTTS FBB191 4 1/2 US32D (1) LATCHSET 28-10G05 x LL x 619 EXIT (1) CLOSER 75SS-DA (3) SILENCERS GJ64	GROUP 4 (3) PAIR BUTTS FBB191 4 1/2 US32D (1) LATCHSET 28-10G05 x LL x 619 EXIT (1) CLOSER 75SS-DA (ACTIVE) (2) FLUSH BOLT 3450 (1) STOP FLOOR MOUNTED (3) SILENCERS GJ64 (1) ASTRAGAL	ALL EXTERIOR DOORS SHALL BE WEATHER STRIPPED AT HEAD AND JAMBS WITH PEMKO SERIES 335A AND 336 OR EQUAL. AT BOTTOM RAIL WITH PEMKO 314A OR EQUAL. USE PEMKO 1877A THRESHOLD UNLESS OTHERWISE NOTED. PROVIDE RECESS IN CONCRETE AS R'Q'D
GROUP 2 (1) PAIR BUTTS FBB191 4 1/2 US32D (1) LATCHSET 10U15 x LL x 619 PASSAGE (1) CLOSER 75SS-DA (1) STOP FLOOR MOUNTED (3) SILENCERS GJ64	GROUP 5 (1) PAIR BUTTS FBB191 4 1/2 US32D (1) LATCHSET 10U65 x LL x 619 PRIVACY (1) STOP FLOOR MOUNTED (3) SILENCERS GJ64	
GROUP 3 (1) PAIR BUTTS FBB191 4 1/2 US32D (1) LATCHSET 10U15 x LL x 619 PASSAGE (1) STOP FLOOR MOUNTED (3) SILENCERS GJ64		

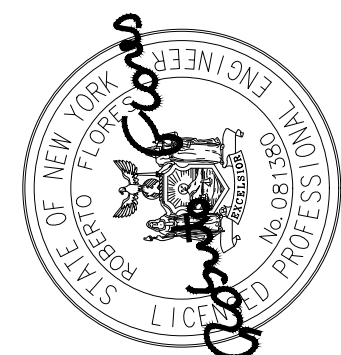
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31 NORTH MAIN STREET, LIBERTY, NY 12754 • 845.747.9952
6 TOWNSEND STREET, WALTON, NY 13856 • 607.865.9235
16 EAST MARKET ST., RED HOOK, NY 12571 • 518.452.1290
548 BROADWAY, MONTICELLO, NY 12051 • 845.791.7777

[illegible]

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

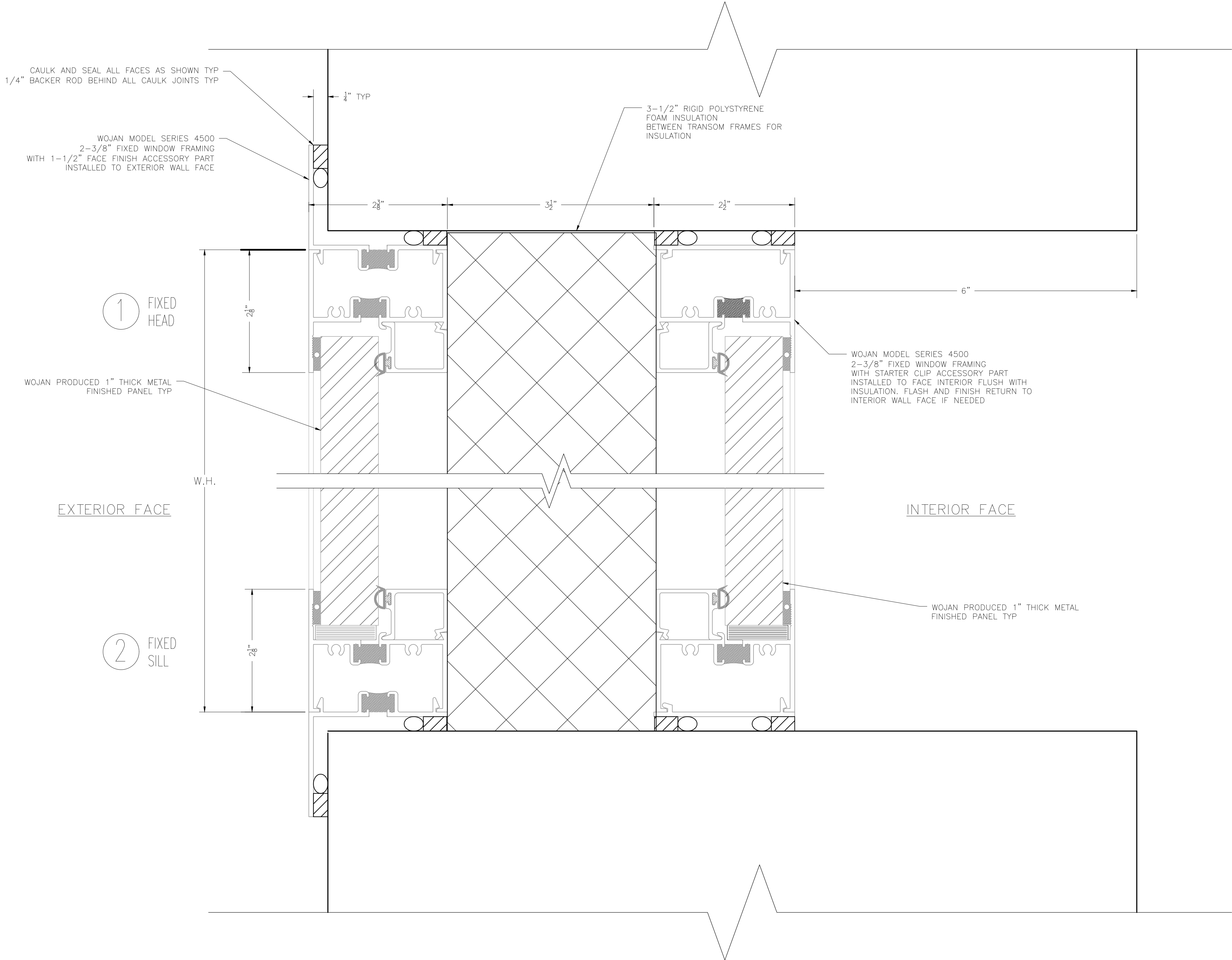
PUMP STATION DOOR AND WINDOW SCHEDULES

SHEET:

A-107

BID PLANS

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1
108 **PUMP STATION WEST ELEVATION**
SCALE: FULL SIZE (FORESHORTENED HEIGHT FOR CLARITY)

BID PLANS

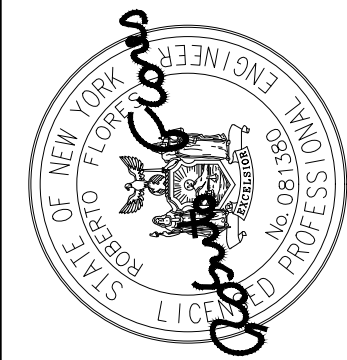
REVISIONS	
NO.	DATE

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

TRANSOM PANEL
DETAILS

SHEET:

A-108



DELAWARE
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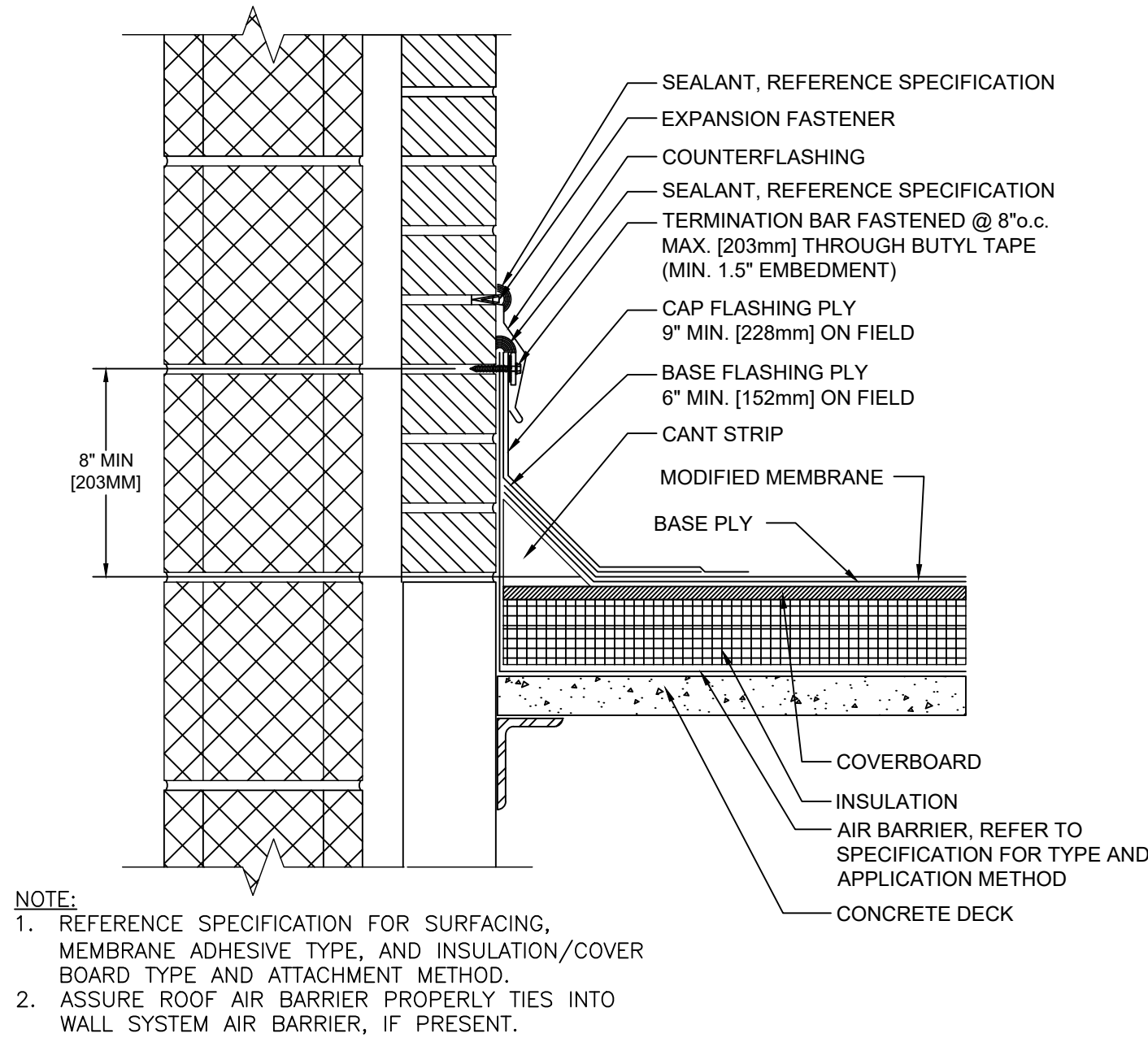
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN STREET, NEWburgh, NY 12550 - 607.432.8073
110 COLUMBIA STREET, NEWburgh, NY 12550 - 607.432.8073
8 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
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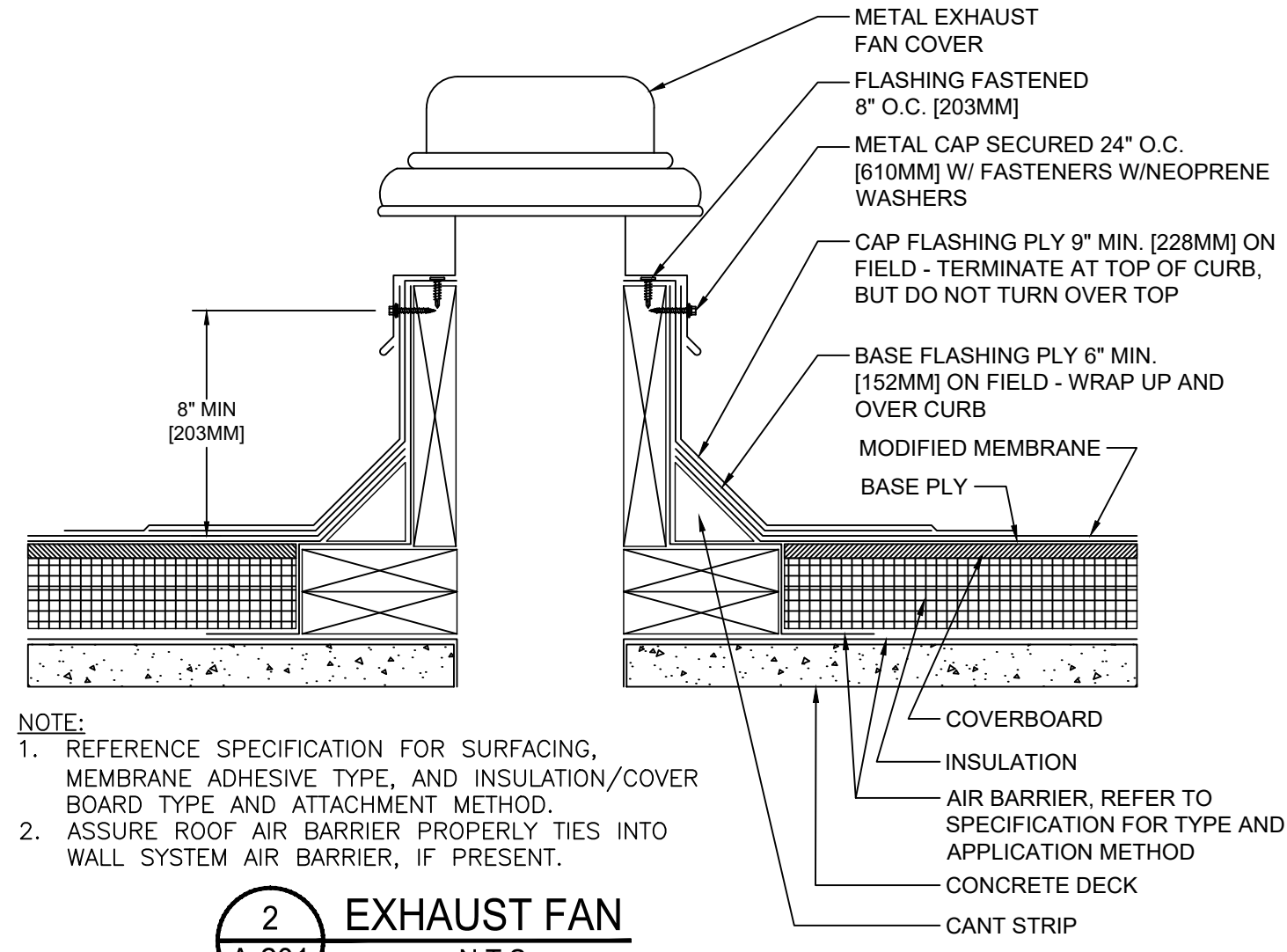
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DRAWN BY: MULLERK
SCALE: AS SHOWN
REVIEWED BY: PFM
PROJECT NO.: 19-1843
FILE: SAW MILL PUMP STATION_REV1_20201224.DWG

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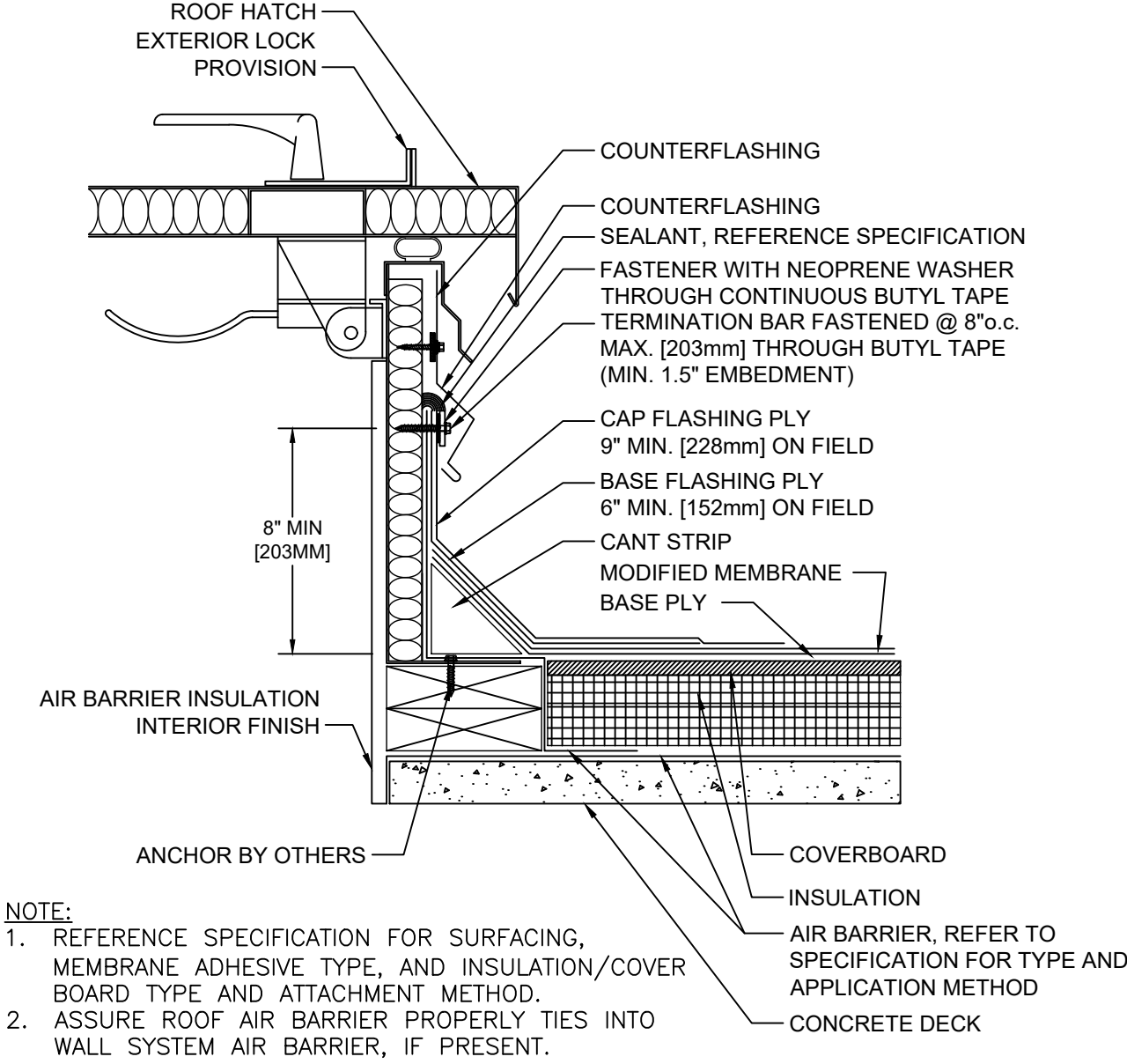
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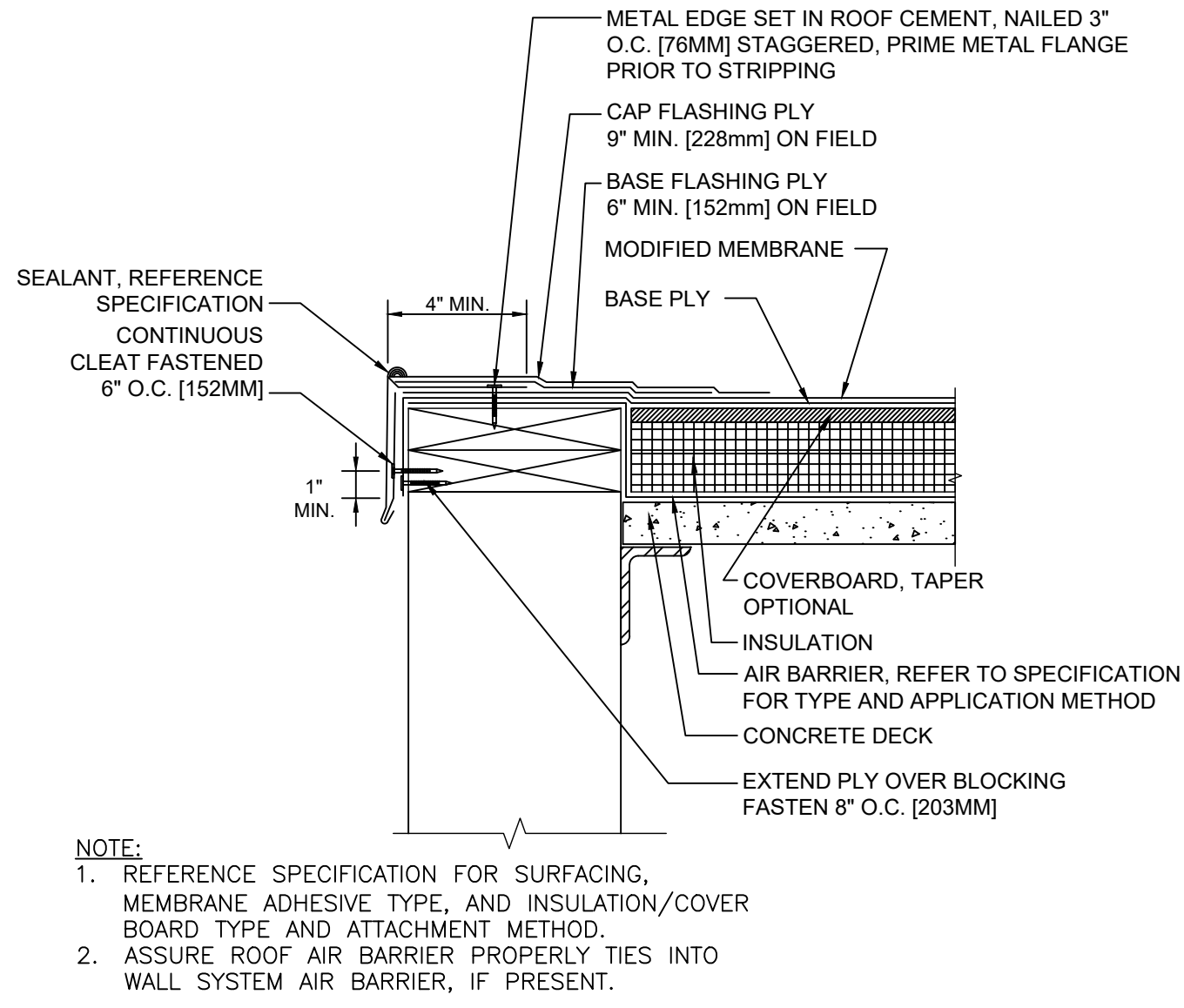
1
A-201 **WALL FLASHING -**
REGLET MOUNTED COUNTERFLASHING
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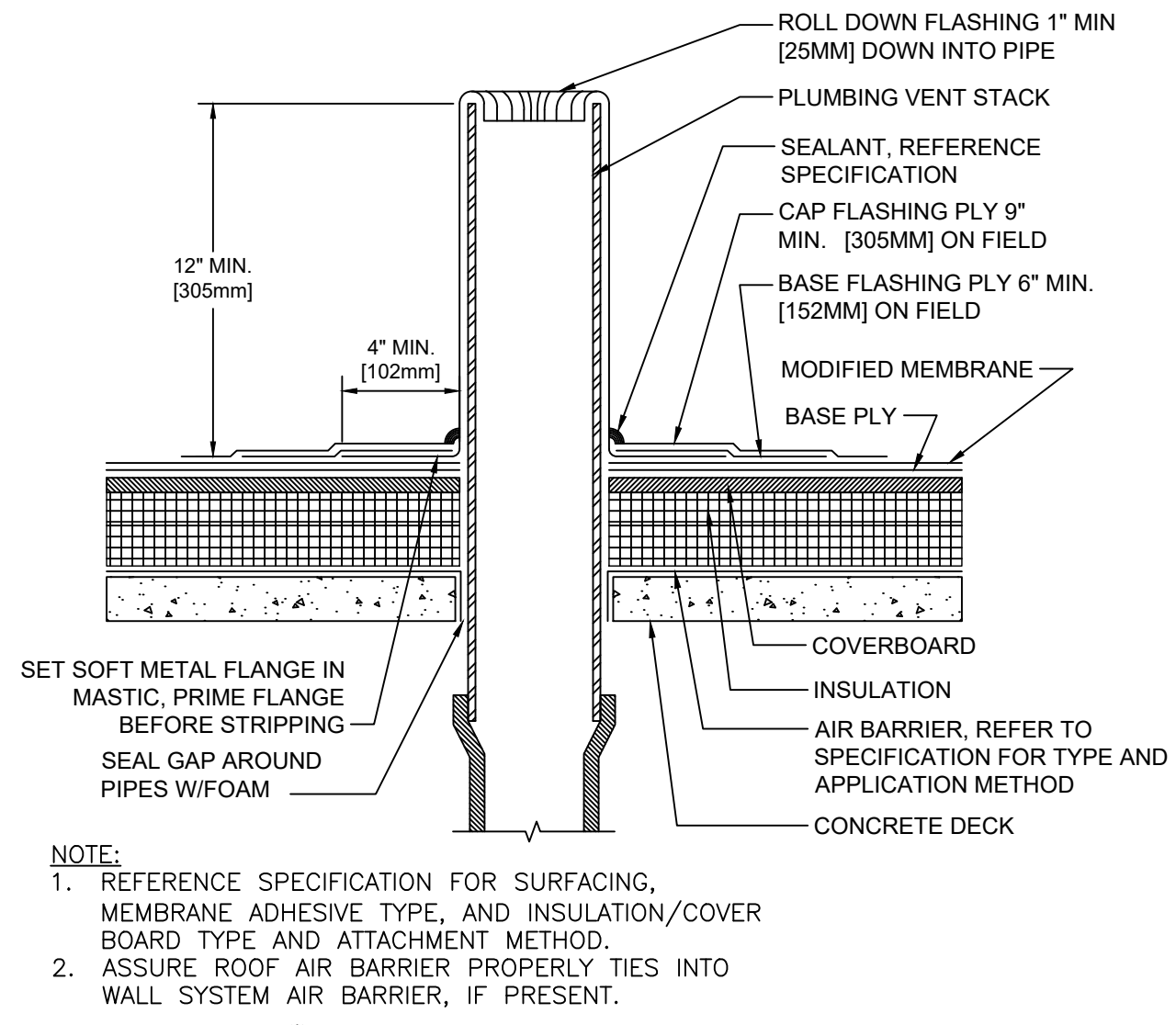
2
A-201 **EXHAUST FAN**
SCALE: N.T.S.



3
A-201 **HATCH DETAIL**
SCALE: N.T.S.



4
A-201 **METAL EDGE - DRIP EDGE**
SCALE: N.T.S.



5
A-201 **PLUMBING STACK**
SCALE: 1 1/2" = 1'-0"

BID PLANS

REVISIONS		NO.	DATE	DESCRIPTION

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

TYPICAL ROOF REPAIR
DETAILS

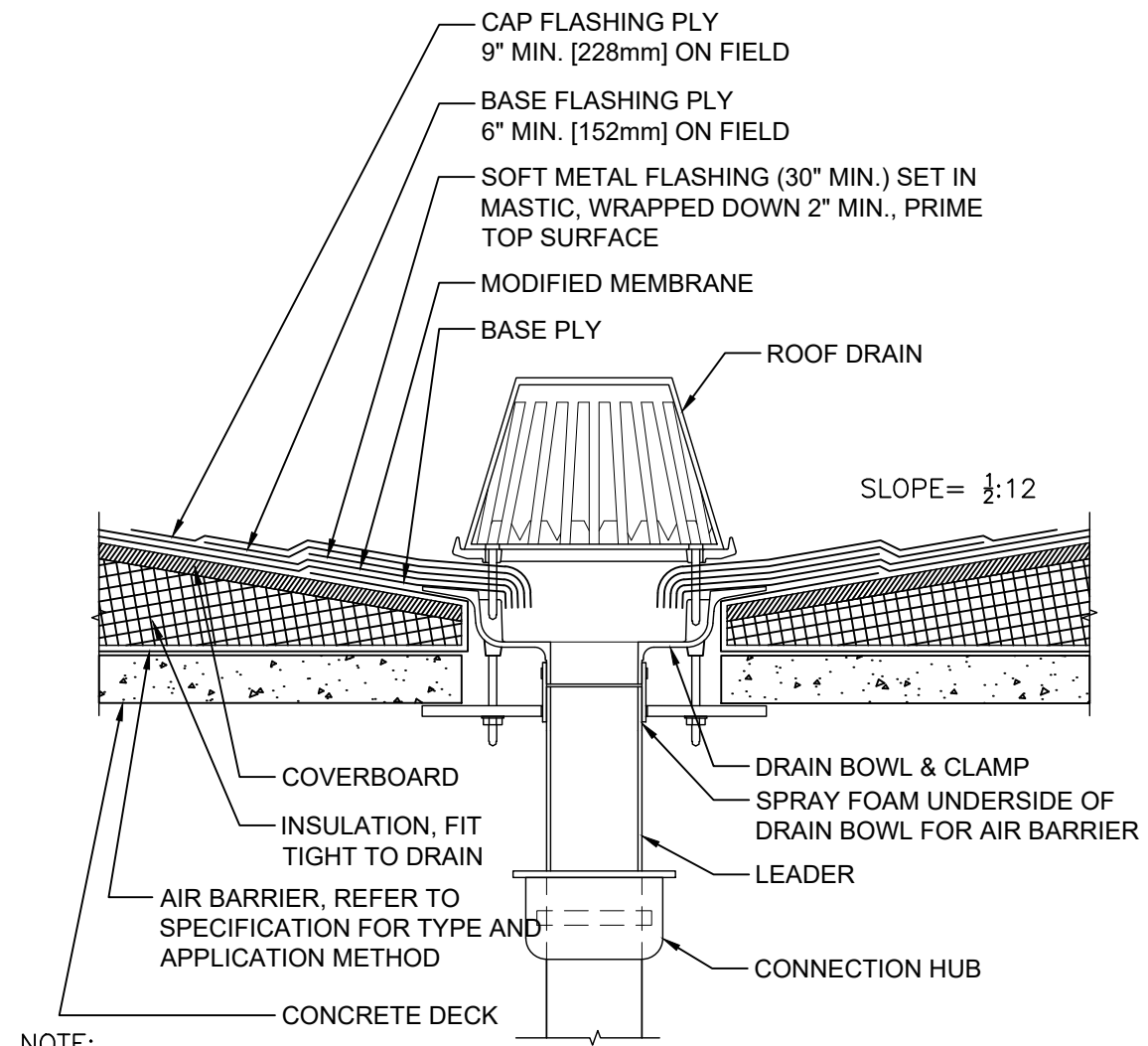
SHEET:
A-201



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1000 N. 1ST ST., ONEONTA, NY 13920 - 607.422.8073
8 TOWNSEND STREET, WALTON, NY 13856 - 607.868.9235
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

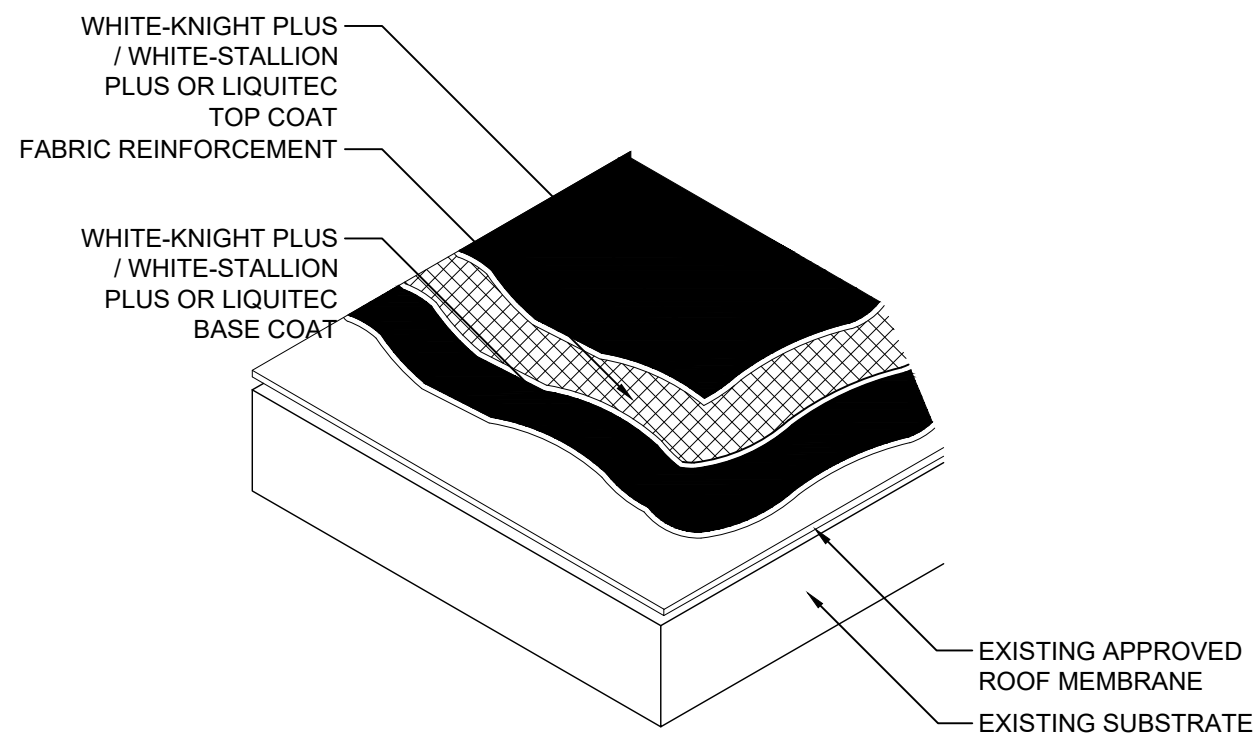
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DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: PFM
PROJECT NO.: 19-1843
FILE: SHPS_PUMP_STATION_REV_20201224.DWG

File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SHIPS_PUMP_STATION_REV_20201224.DWG Sheet: 1/21/2022 10:43:42 AM Plotted: 1/27/2022 3:47:06 PM User: Kyle Muller LastSavedBy: mullerk



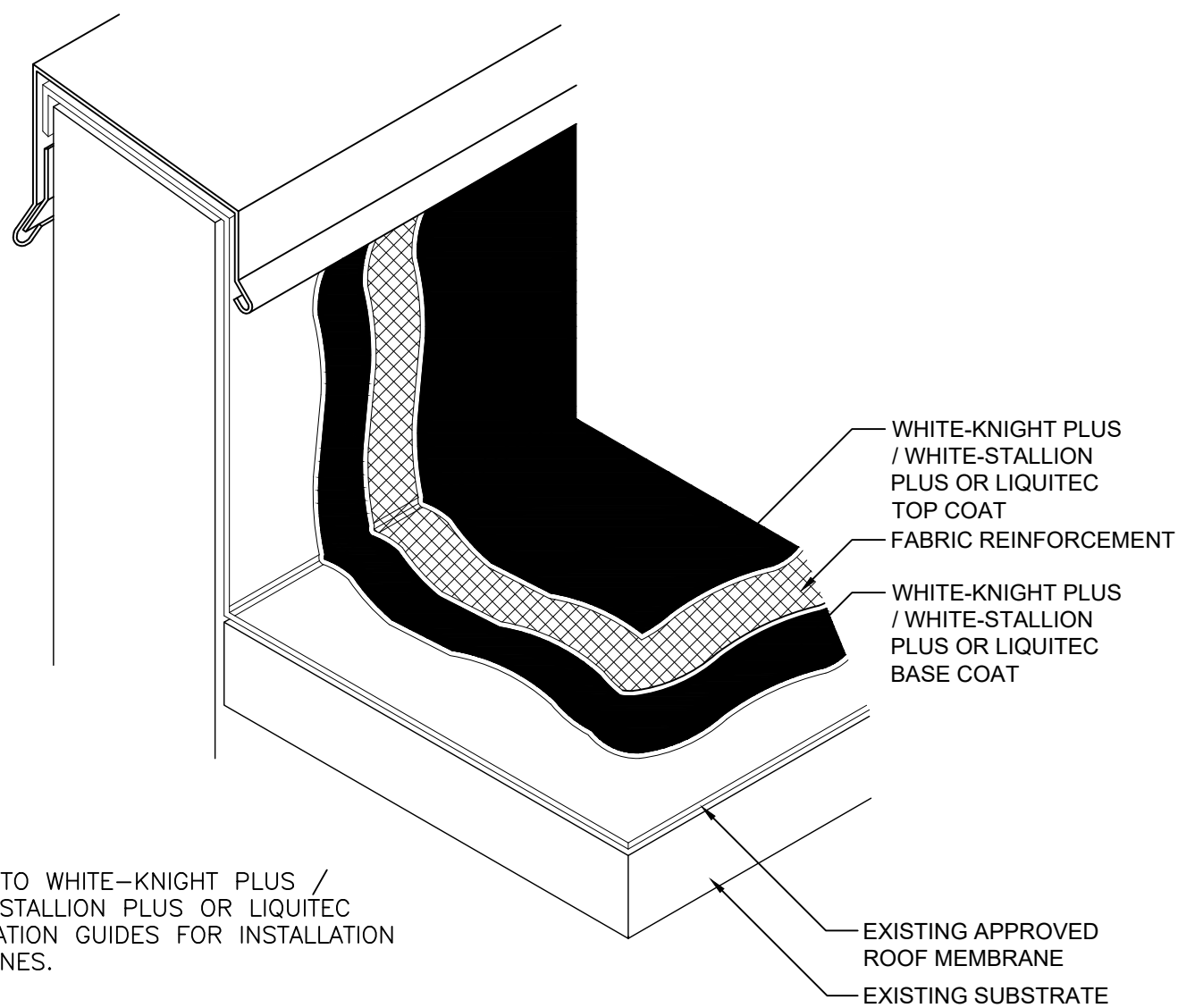
- NOTE:
1. REFERENCE SPECIFICATION FOR SURFACING, MEMBRANE ADHESIVE TYPE, AND INSULATION/COVER BOARD TYPE AND ATTACHMENT METHOD.
 2. ASSURE ROOF AIR BARRIER PROPERLY TIES INTO WALL SYSTEM AIR BARRIER, IF PRESENT.

1 ROOF DRAIN
SCALE: N.T.S.



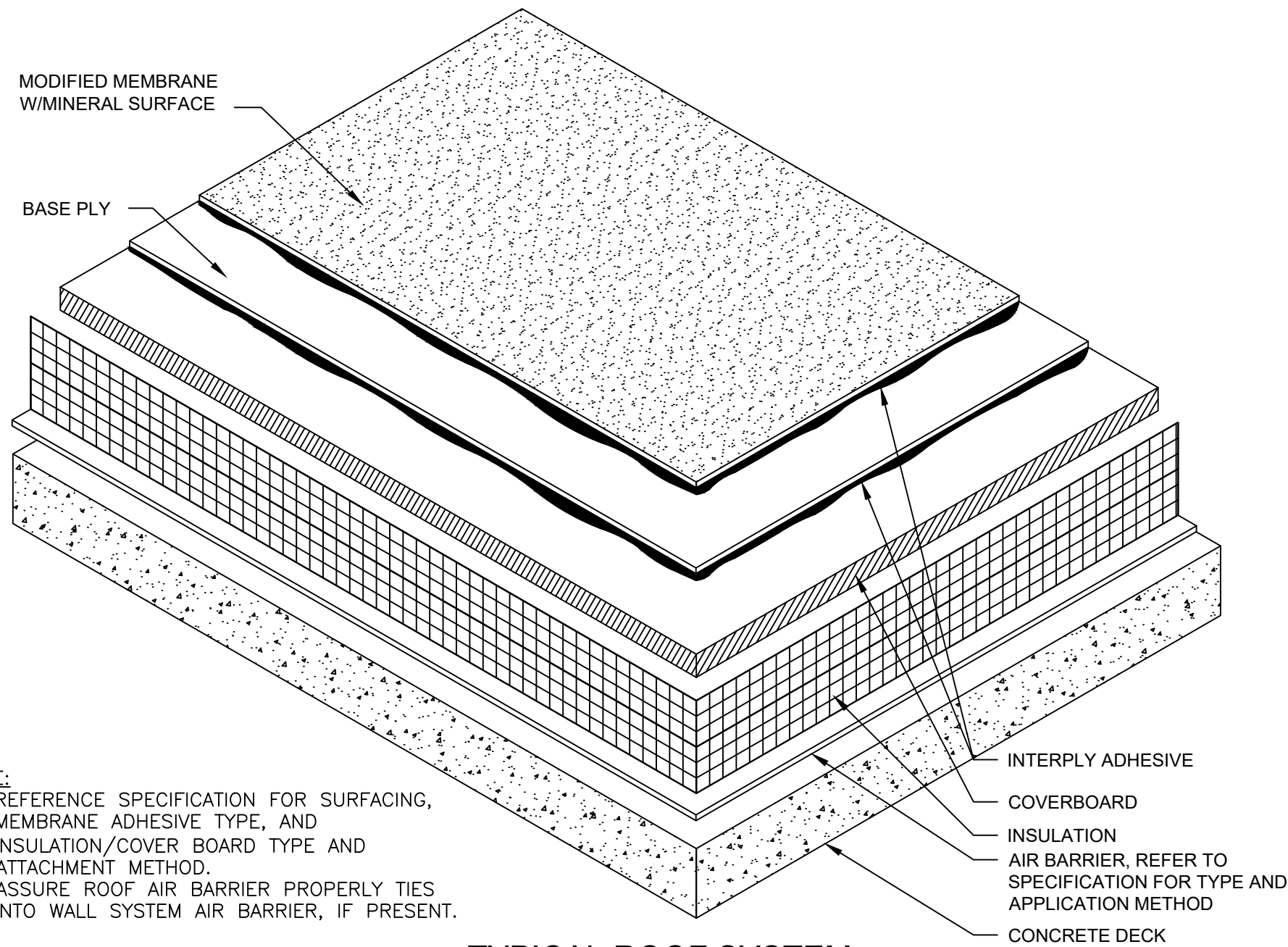
- NOTE:
1. REFER TO WHITE-KNIGHT PLUS / WHITE-STALLION PLUS OR LIQUITEC APPLICATION GUIDES FOR INSTALLATION GUIDELINES.

4 TYPICAL FULLY REINFORCED FIELD DETAIL
SCALE: N.T.S.



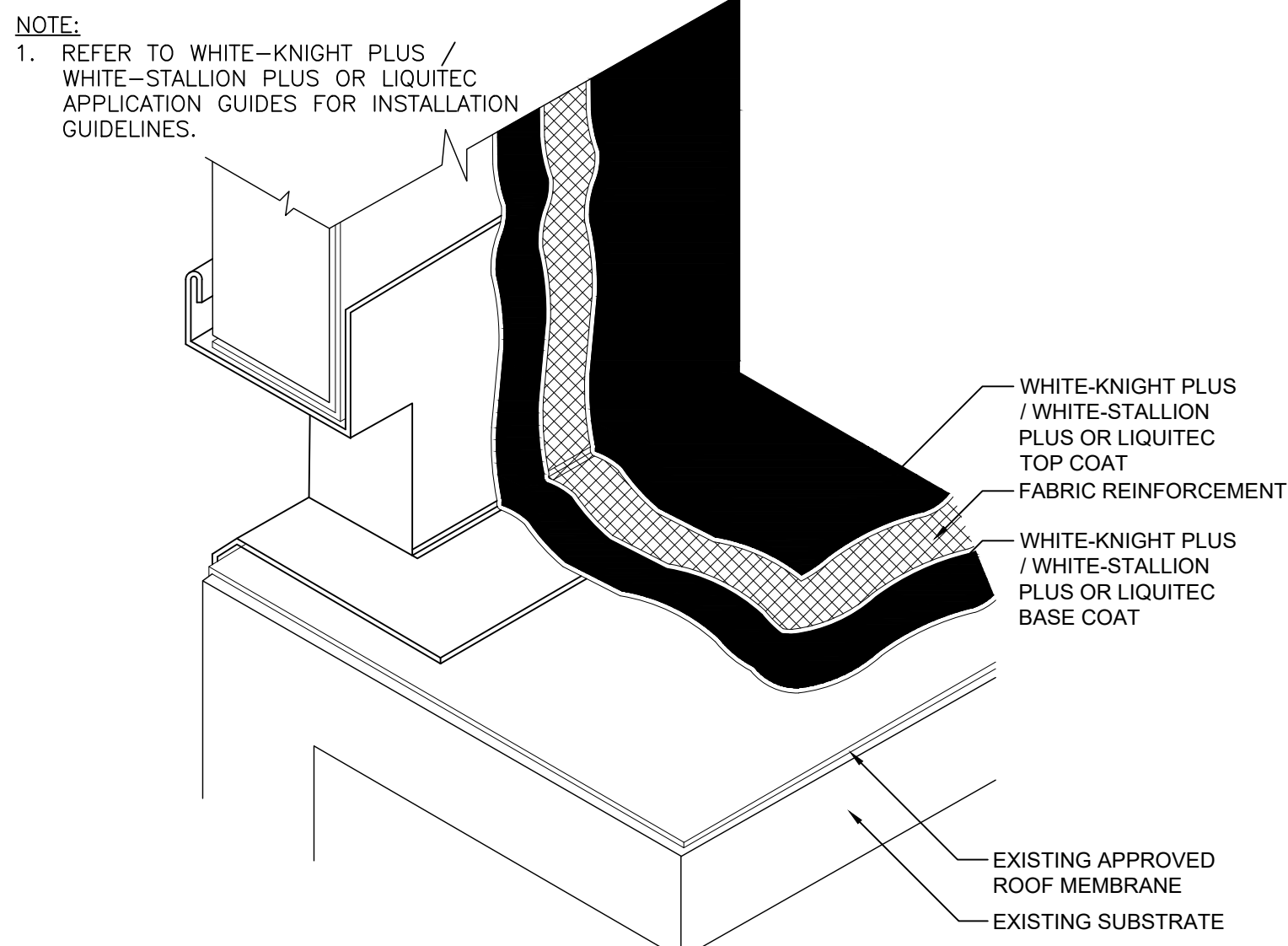
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6 TYPICAL WALL DETAIL
SCALE: N.T.S.



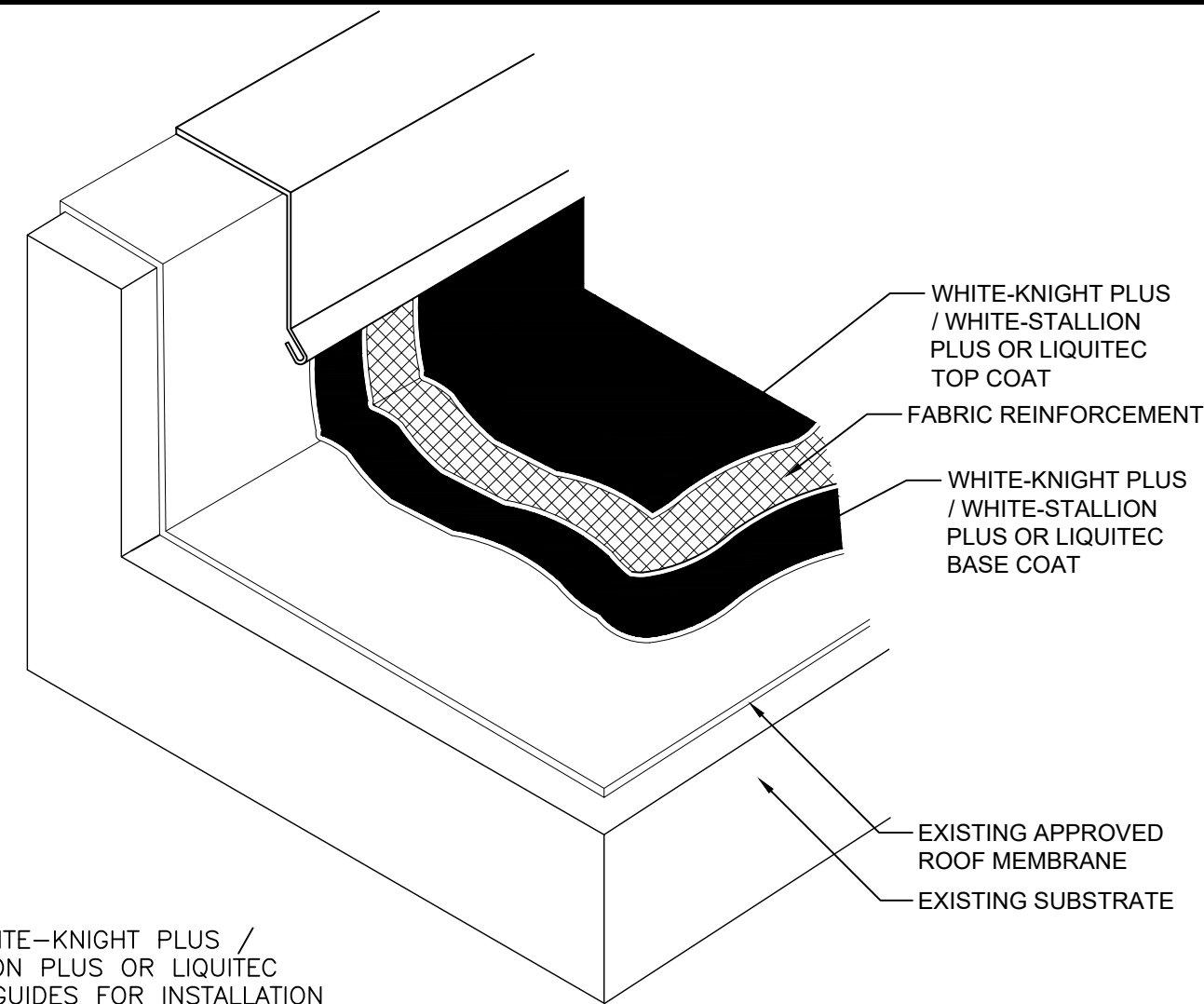
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 2. ASSURE ROOF AIR BARRIER PROPERLY TIES INTO WALL SYSTEM AIR BARRIER, IF PRESENT.

2 TYPICAL ROOF SYSTEM MINERAL SURFACE
SCALE: 3" = 1'-0"



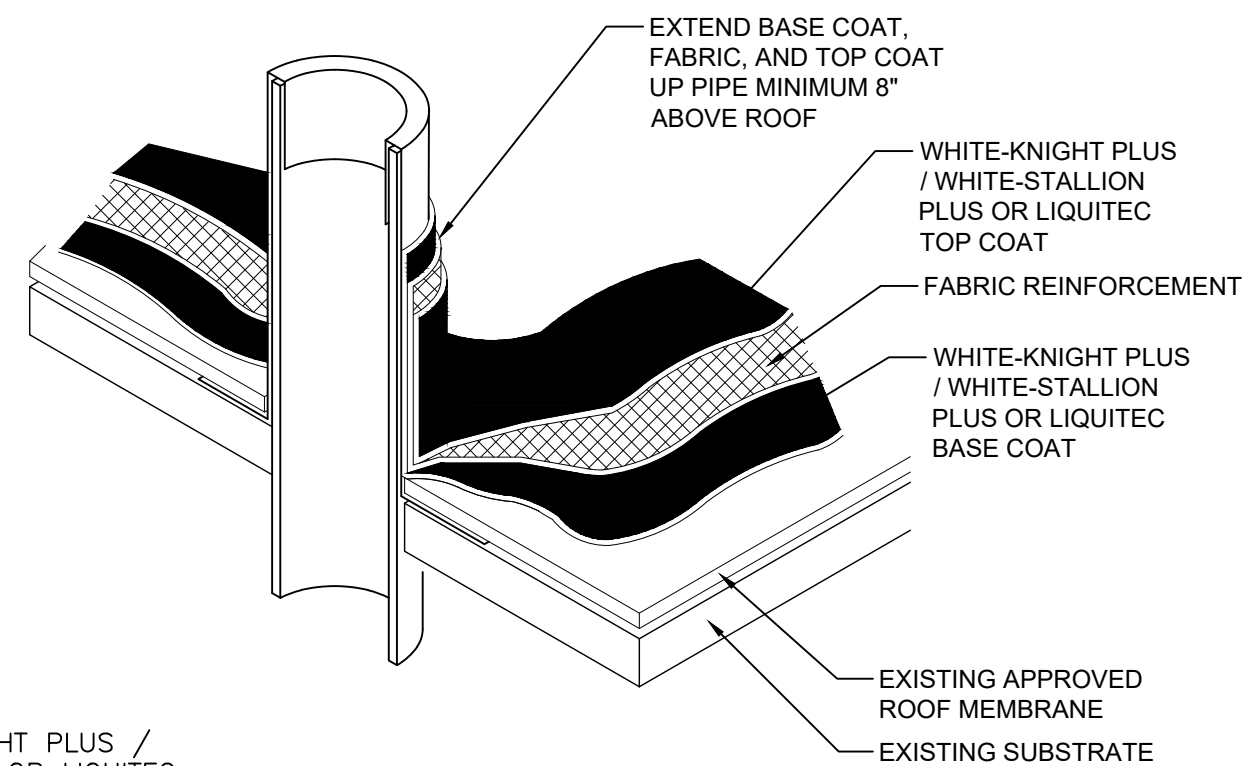
- NOTE:
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7 TYPICAL THROUGH-WALL SCUPPER DETAIL
SCALE: N.T.S.



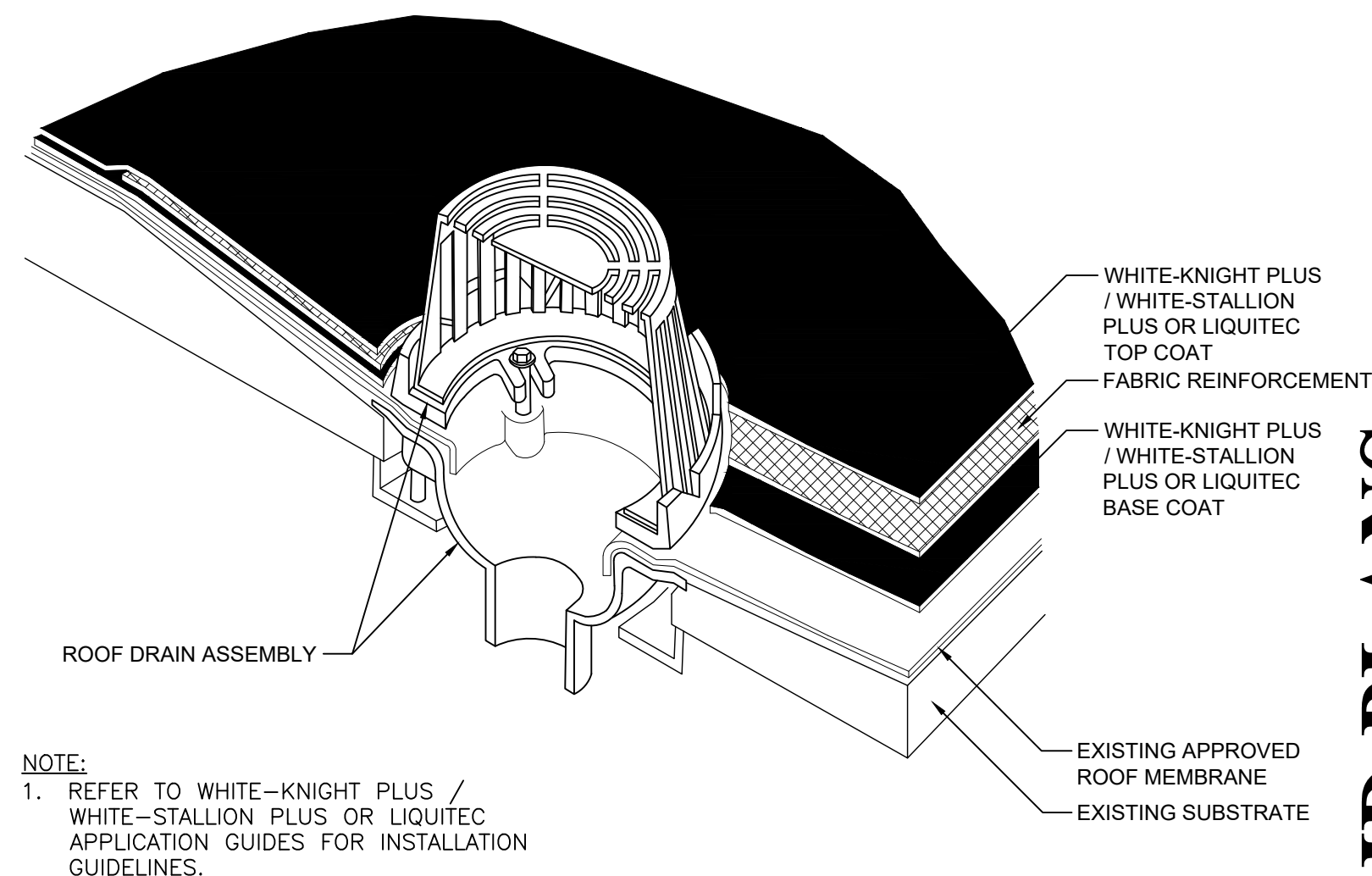
- NOTE:
1. REFER TO WHITE-KNIGHT PLUS / WHITE-STALLION PLUS OR LIQUITEC APPLICATION GUIDES FOR INSTALLATION GUIDELINES.

3 TYPICAL CURB DETAIL
SCALE: N.T.S.



- NOTE:
1. REFER TO WHITE-KNIGHT PLUS / WHITE-STALLION PLUS OR LIQUITEC APPLICATION GUIDES FOR INSTALLATION GUIDELINES.

5 TYPICAL PIPE PENETRATION DETAIL
SCALE: N.T.S.



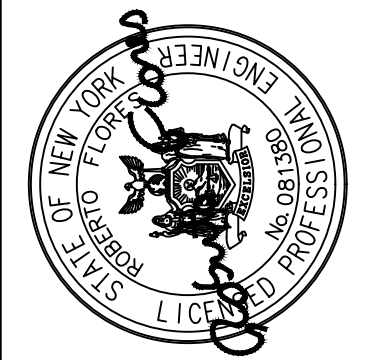
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8 ROOF DRAIN
SCALE: N.T.S.

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DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: PFM
PROJECT NO.: 19-1843
FILE: SHIPS PUMP STATION_REV_20201224.DWG

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN STREET, MONTICELLO, NY 13820 - 607.432.8073
8 TOWNSEND STREET, WALTON, NY 13856 - 607.865.9235
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

TYPICAL ROOF REPAIR
DETAILS

BID PLANS

SHEET:
A-202

File: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SHPS_PUMP_STATION_REV1_20201224.DWG Sheet: 5/9/2022 11:52:25 AM Plotted: 9/17/2022 4:49:51 PM User: Kyle Muller LastSavedBy: mullerk

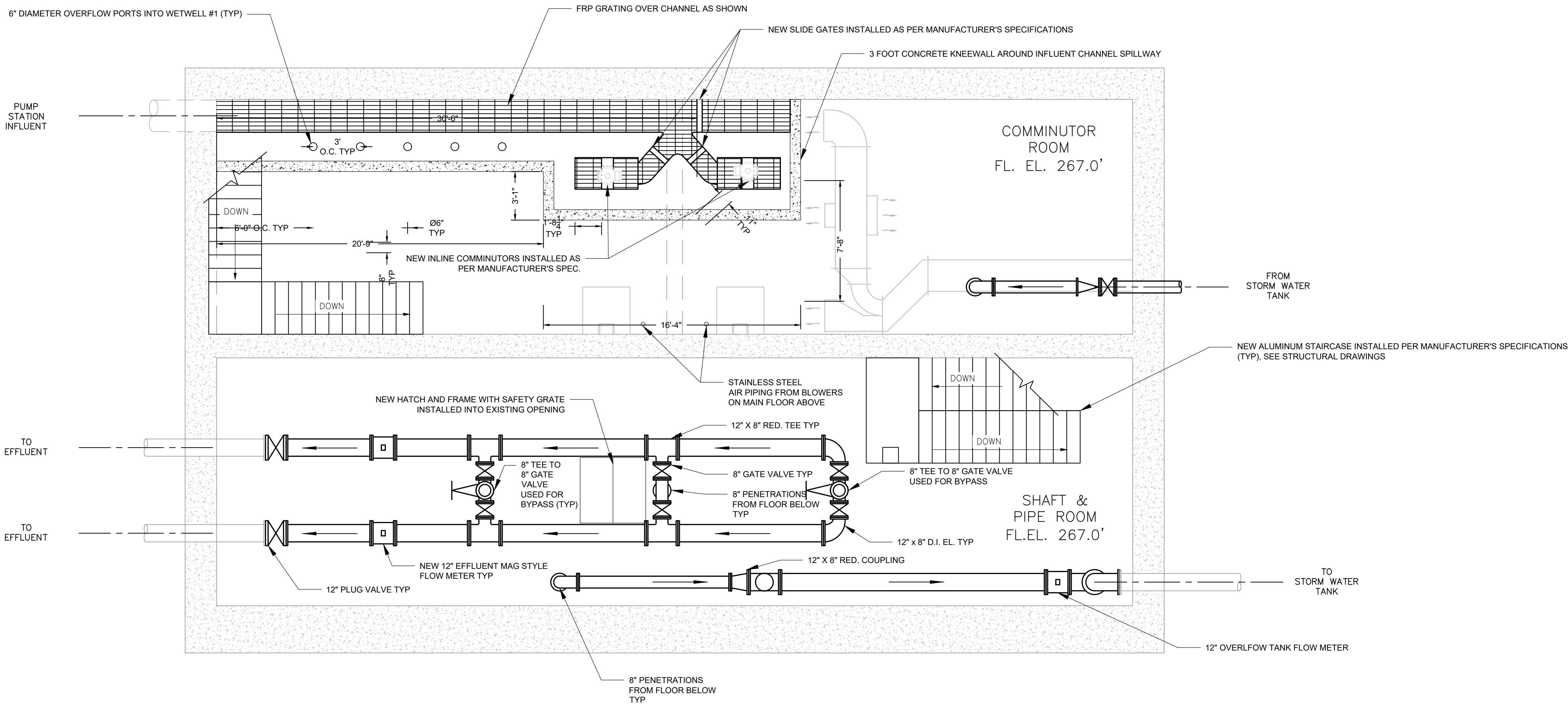
PUMP DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM) at TDH (Ft.)		ELECTRICAL REQUIREMENTS
EFFLUENT PUMP #1	SUIZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH		460V/3P/60Hz
EFFLUENT PUMP #2	SUIZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH		460V/3P/60Hz
EFFLUENT PUMP #3	SUIZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH		460V/3P/60Hz
EFFLUENT PUMP #4	SUIZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH		460V/3P/60Hz
STORM PUMP #1	SUIZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH		460V/3P/60Hz
STORM PUMP #2	SUIZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH		460V/3P/60Hz
SUMP PUMP #1	N/A	5	N/A	N/A		460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A		460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz
WETWELL BLOWER #2	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz

GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
WETWELL GRINDER #1	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz
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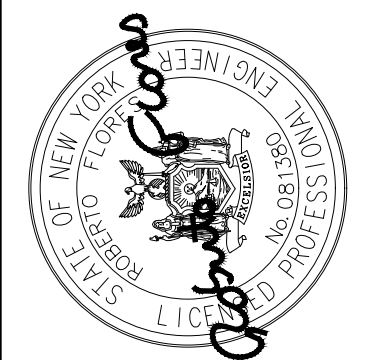
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DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
PROJECT NO.: 19-1843
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CIVIL AND ENVIRONMENTAL ENGINEERING
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PROPOSED
INTERMEDIATE FLOOR
PLAN

SHEET:

M-101

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

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EFFLUENT PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH		460V/3P/60Hz
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STORM PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH		460V/3P/60Hz
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SUMP PUMP #1	N/A	5	N/A	N/A		460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A		460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS	
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz	
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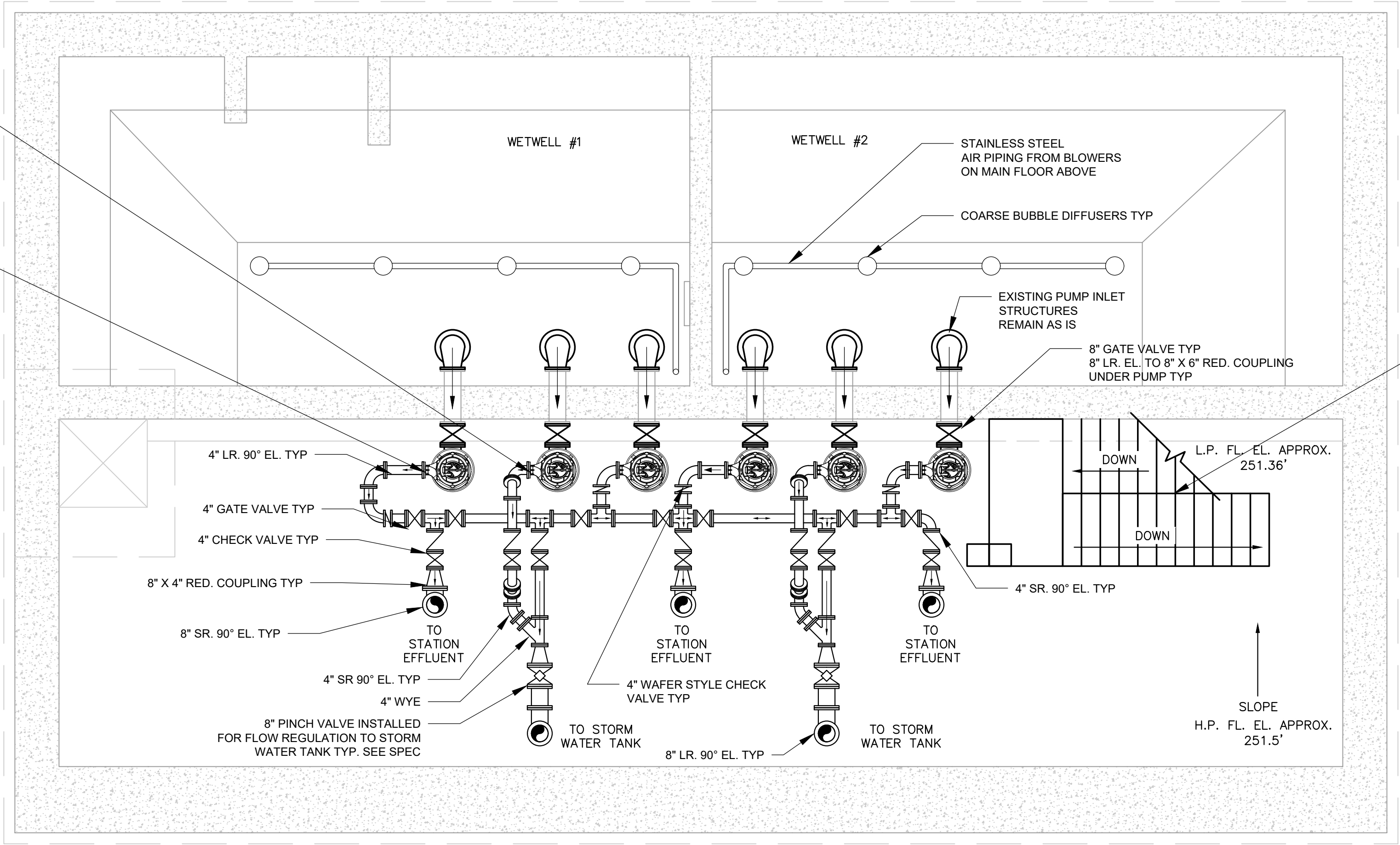
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WETWELL GRINDER #1	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz	
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DRY-PIT SUBMERSIBLE PUMP,
TO STORM WATER TANK TYP
*PUMP SITS ON SUPPLIED STAND CONNECTED TO
CONCRETE BASE. SEE STRUCTURAL FOR BASE
DETAILS

DRY-PIT SUBMERSIBLE PUMP,
TO PLANT EFFLUENT TYP
*PUMP SITS ON SUPPLIED
STAND CONNECTED TO CONCRETE
BASE. SEE STRUCTURAL FOR BASE
DETAILS



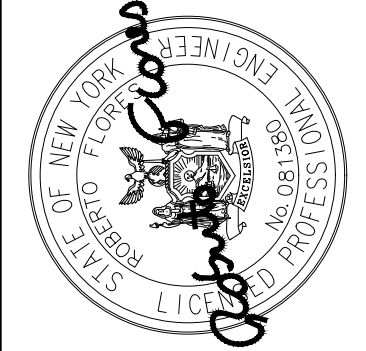
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DELAWARE
ENGINEERING, D.P.C.

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548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
LOWER FLOOR
PLAN

SHEET:

M-102

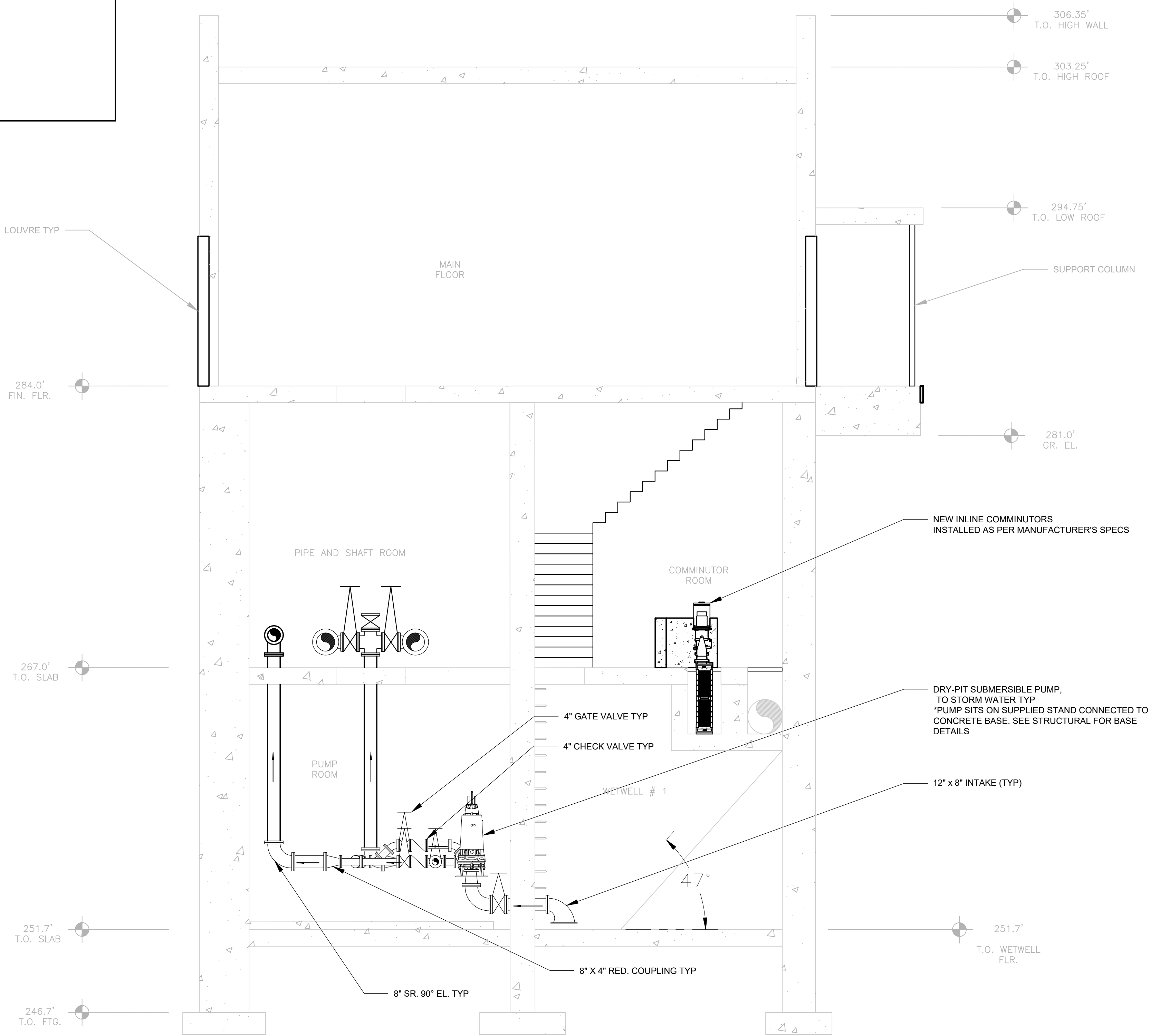
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STORM PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
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SUMP PUMP #1	N/A	5	N/A	N/A	460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A	460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz
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GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
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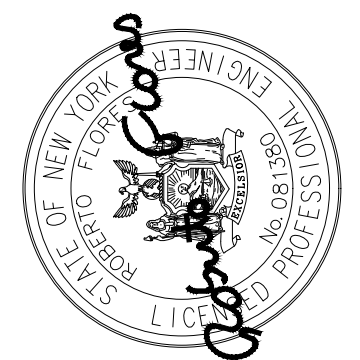
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BID PLANS

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FILE: SHPS_PUMP_STATION_REV1_20201224.DWG

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
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55 SOUTH MAIN STREET, ONEONTA, NY 13920 - 607.422.8073
1000 N. 1ST STREET, ALBANY, NY 12207 - 518.452.1290
8 TOWNSEND STREET, WALTON, NY 13856 - 607.868.9235
16 EAST MARKET STREET, RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
PROPOSED SECTION 1

SHEET:

M-103

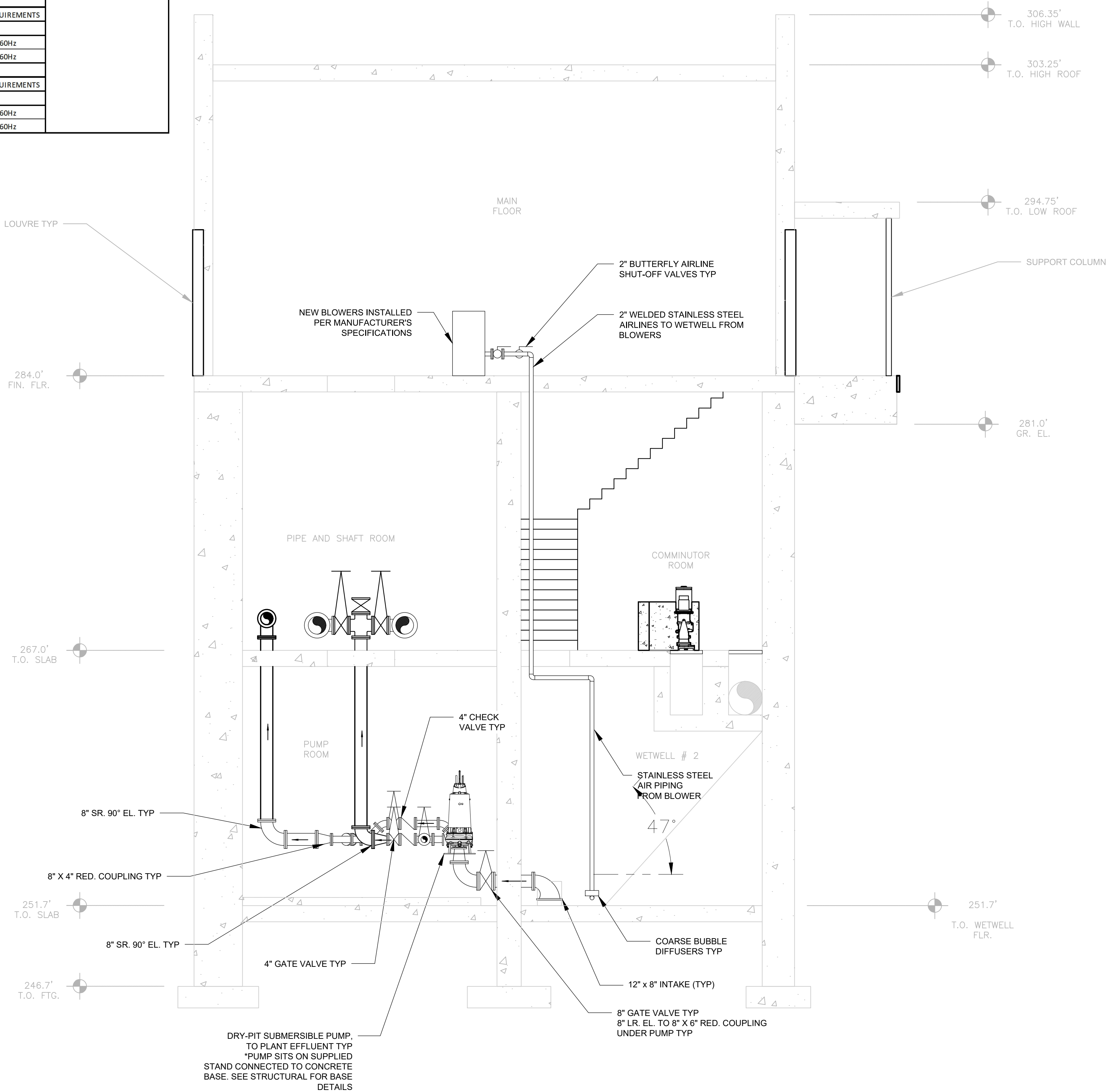
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STORM PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
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SUMP PUMP #1	N/A	5	N/A	N/A	460V/3P/60Hz
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BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
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PROJECT NO.:	19-1843
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**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290

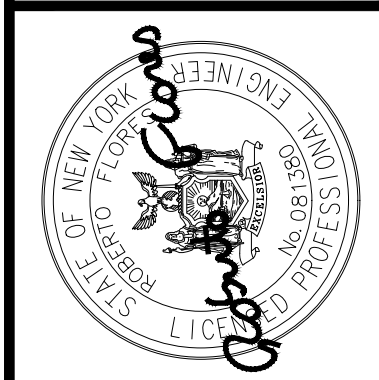
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548 BROADWAY, MONTICELLO, NY 12051 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
PROPOSED SECTION 2

SHEET:
M-104

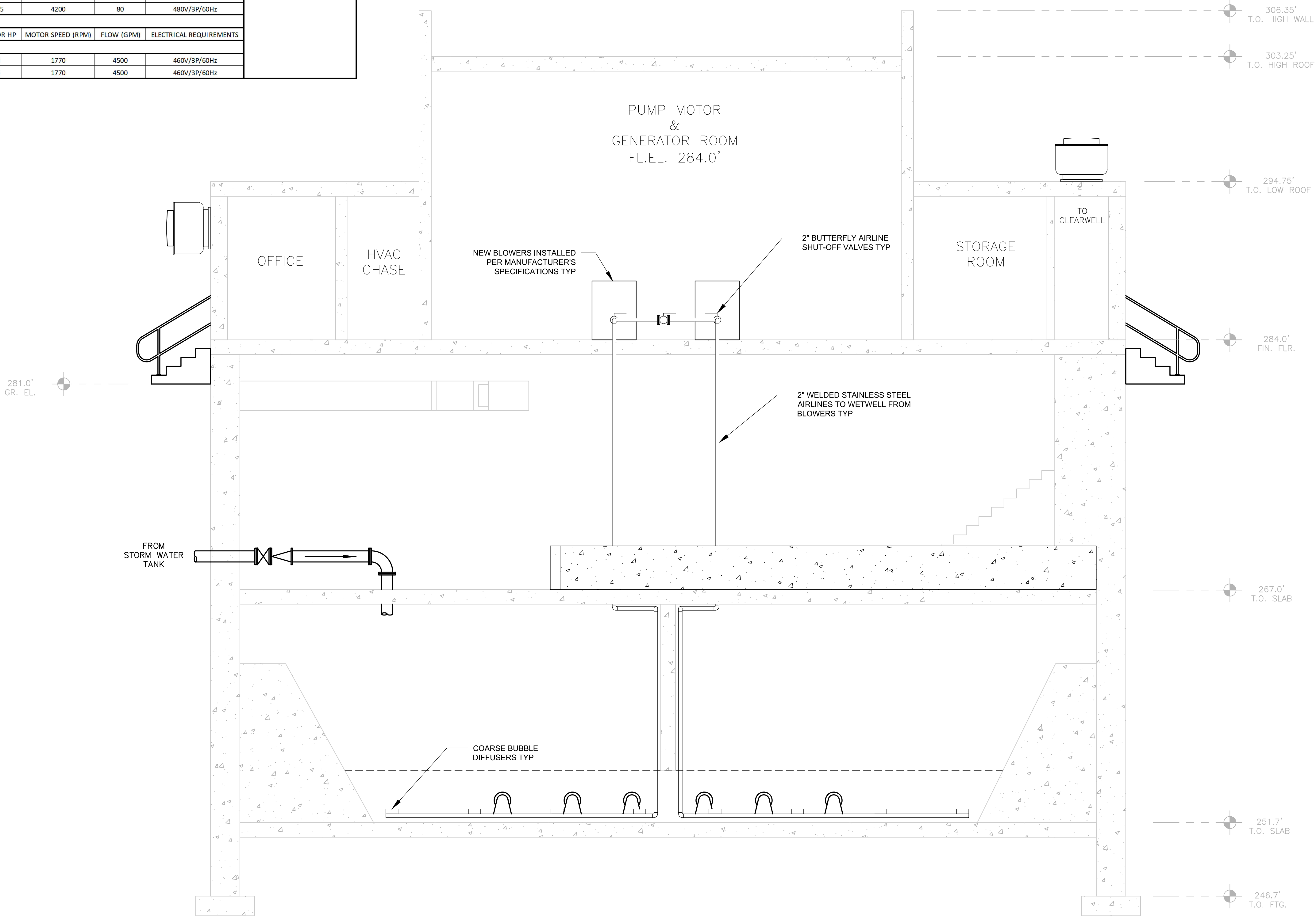
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GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
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BID PLANS

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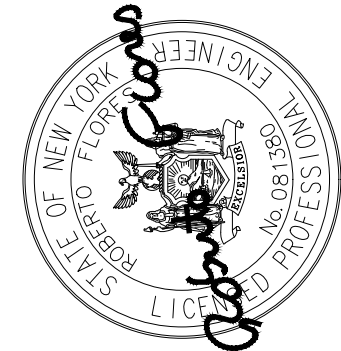
M-105

PUMP STATION
PROPOSED SECTION 3

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS

NO.	DATE	DESCRIPTION



**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING
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File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\PUMP STATION_C DRAWINGS STRUCTURAL-REDWG Saved: 11/2/2022 2:56:02 PM Plotted: 1/21/2022 3:53:26 PM User: Kyle Muller UnitSavedBy: mullek

PROJECT DESCRIPTION:

- STAIRS: CONTRACTOR SHALL DEMOLISH EXISTING REINFORCED CONCRETE STAIR CASES AND REPLACE THEM WITH ALUMINUM STAIR CASES AS SHOWN IN THE FOLLOWING DRAWINGS. CONTRACTOR SHALL CONFIRM ALL EXISTING MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW STAIR CASES.
- CONTAINMENT WALL: CONTRACTOR SHALL CONSTRUCT NEW REINFORCED CONCRETE CONTAINMENT WALL WITH INTEGRAL POST INSTALLED WATER STOPS AS DEPICTED ON SHEET S105.
- OVERFLOW TANK: CONTRACTOR SHALL REPAIR ALL DAMAGED AND WEATHER CONCRETE ASSOCIATED WITH EXISTING OVERFLOW TANK.

GENERAL:

- THE STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THE ENTIRE SET OF CONTRACT DOCUMENTS (INCLUDING THE PROJECT SPECIFICATIONS) INTO THEIR WORK.
- THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
- VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS.
- DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION IN A TIMELY MANNER PRIOR TO BID OPENING.

CODE REQUIREMENTS:

- CONFORM TO 2018 INTERNATIONAL BUILDING CODE (IBC) AND NYS 2020 BUILDING CODE
- ALL REFERENCE TO OTHER CODES AND STANDARDS (ACI, ASCE, ASTM, ETC.) SHALL BE FOR THE EDITIONS LISTED IN CHAPTER 35 OF THE IBC.

TEMPORARY CONDITIONS:

- THE STRUCTURE HAS BEEN DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT REQUIRED AS A RESULT OF THE CONTRACTOR 'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- CONTRACTOR 'S CONSTRUCTION METHODS AND/OR SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

EXISTING CONDITIONS:

- ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN CRITERIA:

- DESIGN WAS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE IBC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADS AND ALLOWANCES WERE USED FOR DESIGN, WITH LIVE LOADS (L.L.) REDUCED IN ACCORDANCE WITH THE IBC:

DESIGN CRITERIA			
GEOTECHNICAL DESIGN CRITERIA			
ALLOWABLE SOIL BEARING PRESSURE	1500 PSF (NO SOILS REPORT)		
SNOW DESIGN CRITERIA			
DESIGN ROOF SNOW LOAD	42 PSF MINIMUM		
SNOW DRIFT	AS SHOWN ON PLANS		
GROUND SNOW LOAD	$P_g = 50 \text{ PSF}$		
FLAT ROOF SNOW LOAD	$P_f = 42 \text{ PSF}$		
EXPOSURE FACTOR	$C_e = 1.0$ (PARTIAL EXPOSED)		
IMPORTANCE FACTOR	$I_h = 1.10$		
THERMAL FACTOR	$C_t = 1.0$		
WIND DESIGN CRITERIA			
MAIN WIND FORCE RESISTING SYSTEM	115 MPH BASIC WIND SPEED (3-SECOND GUST)		
COMPONENTS AND CLADDING	115 MPH BASIC WIND SPEED (3-SECOND GUST)		
EXPOSURE CATEGORY	C		
GUST/INTERNAL PRESSURE	$GC_p = +/- 0.55$		
SEISMIC DESIGN CRITERIA			
RISK CATEGORY	III		
SITE CLASS	D (STIFF SOIL PROFILE PER NYS BUILDING CODE-DEFAULT)		
IMPORTANCE FACTOR	$I_e = 1.25$		
SEISMIC DESIGN CATEGORY	C		
MCE SPECTRAL ACCELERATIONS	$S_s = 0.283_g$	$S_1 = 0.061_g$	
SITE COEFFICIENTS	$F_v = 1.574$	$F_r = 2.4$	
DESIGN SPECTRAL ACCELERATIONS	$S_{ds} = 0.297_g$	$S_{d1} = 0.097_g$	
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PER ASCE 7-16 SECTION 12.8		

STRUCTURAL OBSERVATION:

- THE STRUCTURAL ENGINEER OF RECORD (SER) WILL PERFORM STRUCTURAL OBSERVATIONS BASED ON THE REQUIREMENTS OF THE IBC AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SER TO PERFORM THESE OBSERVATIONS:

STRUCTURAL OBSERVATIONS		
CONSTRUCTION PHASE	OBSERVATION BY SER	COMMENTS
PRIOR TO FIRST CONCRETE POUR	X	REF FOOTNOTE A, B, C
PRIOR TO COVERING STRUCTURAL ELEMENTS	X	REF FOOTNOTE A, B
AS REQUIRED TO ADDRESS STRUCTURAL ISSUES	X	REF FOOTNOTE A, B

- STRUCTURAL OBSERVATIONS ARE INTENDED TO VERIFY GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS. SPECIAL INSPECTIONS AND TESTING ARE STILL REQUIRED.
- A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH VISIT.
- STRUCTURAL OBSERVATION TO OCCUR AFTER THE REINFORCING STEEL HAS BEEN INSTALLED.

FOUNDATIONS:

- FOUNDATION SIZES ARE BASED UPON A MAXIMUM TOTAL LOAD BEARING SOIL PRESSURE AS NOTED IN DESIGN CRITERIA FOR BEARING ON NATIVE SOILS/COMPACTED FILL.
- ALL FOOTINGS SHALL BE A MINIMUM OF 4'-0" BELOW FINAL GRADES.
- ALL DISTURBED SOIL SHALL BE REMOVED BY HAND OPERATION FROM FOOTING EXCAVATIONS TO NEAT LINES AND REPLACED WITH ENGINEERED FILL.
- BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS WHERE STEPS ARE REQUIRED.
- PLACEMENT OF ALL FILL SHALL BE OBSERVED AND TESTED FOR RELATIVE COMPACTION BY A QUALIFIED TECHNICIAN.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO COMMENCEMENT OF FILLING OPERATIONS.
- ALL GENERAL EXCAVATIONS AND FOOTINGS SHALL BE INSPECTED AND APPROVED PRIOR TO THE PLACEMENT OF ANY SOIL BACKFILL AND/OR CONCRETE.
- ALL FILL, BACKFILL, AND COMPACTION ACTIVITIES, PARTICULARLY DURING WET WEATHER CONDITIONS, SHALL FOLLOW RECOMMENDATIONS OF THE ENGINEER.

SPECIAL INSPECTION AND TESTING:

- SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON SHEET SN3. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

SUBMITTALS:

- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING:

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
EMBEDDED STEEL ITEMS	X		
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"

- IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
- DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER " DESIGN CRITERIA."
- THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-16 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
- FIELD ENGINEERING DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE:

- ALL CONCRETE WORK SHALL CONFORM TO " ACI 318-- BUILDING CODE AND ACI 350- REQUIREMENTS FOR STRUCTURAL CONCRETE" AND CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
- CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39, UNLESS NOTED OTHERWISE, AND SHALL BE AS FOLLOWS:

CONCRETE STRENGTHS				
DESCRIPTION	f _c (PSI)	WATER -CEMENT RATIO BY WEIGHT	ENTRAINED AIR	OTHER
MATS, FOOTINGS AND WALLS	4,500	0.42	6% +/- 1.5%	
EXTERIOR SLAB-ON-GRADE	3,000	0.50	6% +/- 1.5%	

NOTES:

- VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS.
- CONCRETE MIXES SHALL BE NORMAL WEIGHT AND CONTAIN PORTLAND CEMENT CONFORMING TO ASTM C150 FOR TYPE I, OR TYPE II.
- AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C260.

- MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:

MINIMUM CEMENT CONTENT	
f _c (PSI)	MINIMUM CEMENT CONTENT PER CUBIC YARD
4,500	590 LBS.

NOTES:

- FLYASH CONFORMING TO ASTM C618 " TYPE F, " OR " TYPE C " MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.
- THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH ACI-318 CHAPTER 5, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE.
 - NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS IT CONFORMS TO THE APPROVED MIX DESIGN AND IS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER.
 - A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 USED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS SHALL BE INCORPORATED INTO CONCRETE MIX DESIGNS. A HIGH RANGE WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494 "TYPE F, OR TYPE "G" MAY BE USED IN CONCRETE MIXES PROVIDED THAT THE SLUMP DOES NOT EXCEED 10-INCHES.
 - CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION WHEREVER PRACTICAL. CONSTRUCTION JOINTS IN BEAMS, JOISTS, AND SLABS SHALL BE LOCATED AT MID-SPAN WITH REINFORCING CONTINUING THROUGH AS IF THE JOINT DID NOT OCCUR. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE LOCATED MIDWAY BETWEEN COLUMNS OR PILASTERS.
 - SLEEVES, OPENING, CONDUITS, AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE. CONDUITS EMBEDDED IN SLABS SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN ONE-THIRD THE THICKNESS OF THE SLAB AND SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS ON-CENTER.
 - THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE LAYOUT OF CONSTRUCTION AND CONTROL JOINTS FOR CONCRETE SLABS-ON-GRADE. THE JOINTS SHALL BE LOCATED AT MAXIMUM 12'-0" ON-CENTER EACH WAY FORMING RECTANGLES WITH A LENGTH TO WIDTH RATIO NOT EXCEEDING 1.5 IN ANY DIRECTION. CONTROL JOINTS SHALL INTERSECT AT COLUMN BLOCKOUTS, AT ENDS OF BEARING WALLS, AND AT ALL RE-ENTRANT CORNERS IN THE SLAB.
 - ALL BOLTS AND/OR ANCHOR RODS EMBEDDED INTO CONCRETE SHALL CONFORM TO ASTM SPECIFICATION F1554 GRADE 36 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
 - ANCHOR RODS ARE TO BE LOCATED BY MEANS OF TEMPLATE. ANCHOR RODS SHALL NOT BE HAND SET, OR WET SET.
 - ANCHOR RODS AND EMBEDDED ITEMS SHALL BE SET IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE SECTION 7.5.
 - WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE CLEANED AND ROUGHENED TO A MINIMUM 1/4" AMPLITUDE.
 - PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CONCRETE EDGES, UNLESS NOTED OTHERWISE.
 - PREPARATION, CONSTRUCTION AND PROTECTION OF CONCRETE DURING COLD WEATHER OR HOT WEATHER SHALL CONFORM TO ACI 318 5.12, 5.13 AND ACI 306R AND 306R.
 - SEE SPECIFICATIONS FOR REQUIRED WATER/DAMP PROOFING OF ALL BELOW GRADE WALLS AS WELL AS REQUIRED PAINTS AND/OR SEALANTS TO BE APPLIED TO ALL EXPOSED CONCRETE WALL AND SLAB SURFACES, TYP.

SHORING AND RE-SHORING:

- SHORING AND RE-SHORING IS THE CONTRACTOR 'S RESPONSIBILITY AND SHALL CONFORM TO ACI 347-04 AND ACI 347.2R-05.
- SHORING AND SUPPORTING FORMWORK SHALL NOT BE REMOVED FROM HORIZONTAL MEMBERS BEFORE THE CONCRETE STRENGTH HAS REACHED AT LEAST 70 PERCENT OF THE SPECIFIED DESIGN STRENGTH AS DETERMINED FROM FIELD CURED CYLINDERS. IN ADDITION, SHORING SHALL NOT BE REMOVED SOONER THAN THE FOLLOWING:

SHORING AND RE-SHORING		
ELEMENT	MINIMUM REMOVAL TIME	COMMENTS
WALLS, COLUMNS, ELEVATED SLABS AND BEAM SIDES	12 HR. CUMULATIVE WITH 50 DEGREES FAHRENHEIT SURROUNDING TEMPERATURE.	WHERE FORMS ALSO SUPPORT FORMWORK FOR SLABS OR SOFFITS, THE REMOVAL TIME OF THE LATTER GOVERNS

EPOXY REPAIR ADHESIVE:

- EPOXY REPAIR ADHESIVE SHALL CONFORM TO ASTM C881 AND SHALL BE A TWO-COMPONENT, LIQUID EPOXY WITH NON-SAG CONSISTENCY AND LONG POT LIFE. THE EPOXY ADHESIVE SHALL BE SUITABLE FOR USE ON DRY OR DAMP SURFACES.
- ADHESIVE SHALL HAVE A MINIMUM SLANT SHEAR STRENGTH OF 5,000 PSI AND A MINIMUM TENSILE STRENGTH OF 4,000 PSI.
- HOLE SIZES AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS SET FORTH IN THE APPROVED ICC EVALUATION REPORT.
- REINFORCEMENT SHALL NOT BE CUT OR DAMAGED IN EITHER NEW OR EXISTING CONCRETE DURING INSTALLATION.

REINFORCING STEEL:

- REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE TO "ACI 318 — BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND "ACI 315 — MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS AND GRADES UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS:
 - SMOOTH WELDED WIRE FABRIC — ASTM A185
 - CONCRETE COLUMN VERTICAL REINFORCEMENT — ASTM A706, GRADE 60
 - ALL OTHER REINFORCEMENT — ASTM A615, GRADE 60
- REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.
- ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS USING LOW HYDROGEN E70XX ELECTRODES.
- REINFORCING STEEL SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE. BARS IN BEAMS, SLABS, AND FOUNDATIONS SHALL BE SUPPORTED ON WELL-CURED CONCRETE BLOCKS, OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE " CRSI MANUAL OF STANDARD PRACTICE". MSP-1.
- ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT, OR COATINGS OF ANY KIND THAT REDUCE THE BOND STRENGTH TO THE CONCRETE.
- REINFORCEMENT STEEL SHALL NOT BE DISPLACED OR ALTERED FOR THE CONVENIENCE OF OTHER TRADES UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- " WET SETTING " OF REINFORCING STEEL, ANCHOR RODS, EMBEDDED PLATES AND INSERTS IS NOT PERMITTED.
- ALL REINFORCEMENT SHALL BE CONTINUOUS WITH ADEQUATE LAP LENGTHS AT SPLICE LOCATIONS.
- THE FOLLOWING MINIMUM LAP SPLICE LENGTHS SHALL BE PROVIDED FOR ALL REINFORCING STEEL. LAP LENGTHS SHOWN ON THE DRAWINGS TAKE PRECEDENCE OVER THE FOLLOWING LISTED TABLE VALUES:

TYPICAL NON-CONTACT LAP SPLICE SCHEDULE (IN)						
BAR SIZE	3,000 PSI		4,000 PSI		4,500 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	28	22	24	19	23	18
#4	37	29	32	25	31	24
#5	47	36	40	31	38	29
#6	56	43	48	37	46	35
#7	81	63	70	54	66	51
#8	93	72	80	62	76	58
#9	105	81	91	70	85	66
#10	116	89	100	77	95	73
#11	128	98	111	85	104	80

NOTES:

- FOR CENTER-TO-CENTER SPACING LESS THAN THREE TIMES THE BAR DIAMETER (CONTACT SPLICE), MULTIPLY THE ABOVE VALUES BY A FACTOR OF 1.5.
 - TABLE VALUES APPLY FOR CLEAR COVER GREATER THAN OR EQUAL TO 1-1/2". CONTACT ENGINEER OF RECORD IF CONDITIONS VARY.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BAR.
 - VALUES ARE FOR UNCOATED BARS.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL:

MINIMUM CONCRETE COVER (CAST-IN-PLACE)	
USE	COVER
CONCRETE EXPOSED TO EARTH	#6-18: 2" / #5 & SMALLER: 1-1/2"
CONCRETE NOT EXPOSED TO EARTH	#14-18: 1-1/2" / #11 & SMALLER: 3/4"
SLAB-ON-GRADE BARS	1-1/2" COVER FROM TOP OF SLAB
CONCRETE CAST AGAINST EARTH	3"

- CONTINUE HORIZONTAL WALL BARS THROUGH PILASTERS, COLUMNS AND INTERSECTING WALLS.
- PROVIDE HOOKED FOOTING DOWELS OF THE SAME SIZE AND SPACING AS THE VERTICAL WALL REINFORCEMENT. LAP SPLICE DOWELS TO THE VERTICAL WALL REINFORCEMENT AND TERMINATE WITH STANDARD 90 DEGREE HOOK INTO THE FOOTING WITH A MINIMUM 6 " EMBEDMENT BELOW THE TOP OF FOOTING.
- AT SLAB AND WALL OPENINGS, PROVIDE A MINIMUM OF TWO #5 BARS OVER, UNDER, AND AT THE SIDES OF THE OPENING. EXTEND THESE BARS A LAP DISTANCE (OR A MINIMUM OF 2'-0") PAST THE OPENING ON ALL SIDES.
- PROVIDE ONE #5 FOR SINGLE LAYER, AND TWO #5 FOR DOUBLE LAYER REINFORCING, 4'-0 " LONG, DIAGONALLY AT EACH CORNER OF ALL WALL AND SLAB OPENINGS.
- REFERENCE TYPICAL DETAILS FOR THE POSITION OF REINFORCEMENT AT WALL CORNERS, WALL INTERSECTIONS, AND FOR BARS IN SMALL WALL SECTIONS.
- PROVIDE #5 CARRIER BAR AT 3'-0 " MAX SPACING FOR ALL SLAB, JOIST, AND WALL REINFORCING NOT SUPPORTED BY OTHER TRANSVERSE REINFORCEMENT.
- PROVIDE CORNER BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE, NUMBER AND SPACING TO HORIZONTAL REINFORCING. SIZE CORNER BARS TO PROVIDE A FULL LAP WITH HORIZONTAL REINFORCEMENT ON EACH LEG. SEE ALSO TYPICAL HYDRAULIC STRUCTURES CORNER REINFORCEMENT DETAIL FOR ADDITIONAL DIAGONAL BARS AT WALL CORNERS AND TEES.

CONCRETE ACCESSORIES:

- APPROVED POST-INSTALLED ANCHORS ARE AS FOLLOWS:

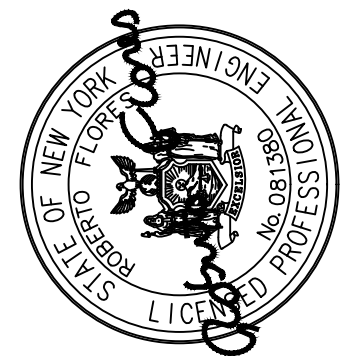
APPROVED POST-INSTALLED CONCRETE ANCHORS		
TYPE	ANCHOR	ICC REPORT
CONCRETE	SIMPSON TITEN HD	ICC ESR-2713
SCREW	HILTI KWIK HUS-EZ	ICC ESR-3027
EPOXY	SIMPSON AT-XP	ICC ESR-2508
ADHESIVE	HILTI HIT-RE 500SD	ICC ESR-2322
EXPANSION	SIMPSON STRONG-BOLT II	ICC ESR-3037
	HILTI KWIK BOLT TZ	ICC ESR-1917

NOTES:

- ALL ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO THE APPLICABLE ICC REPORT.
- REINFORCEMENT SHALL NOT BE CUT IN NEW, OR EXISTING CONCRETE DURING INSTALLATION OF POST-INSTALLED ANCHORS.
- ANCHORS THAT ARE LEFT EXPOSED TO WEATHER SHALL BE STAINLESS STEEL, OR HOT-DIPPED GALVANIZED.

DATE:	01/22
DRAWN BY:	YB
SCALE:	AS SHOWN
REVIEWED BY:	RF
PROJECT NO.:	19-1843
FILE:	

DELAWARE ENGINEERING D.P.C.



REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

BID PLANS

GENERAL
STRUCTURAL NOTES

SHEET:

SN1

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

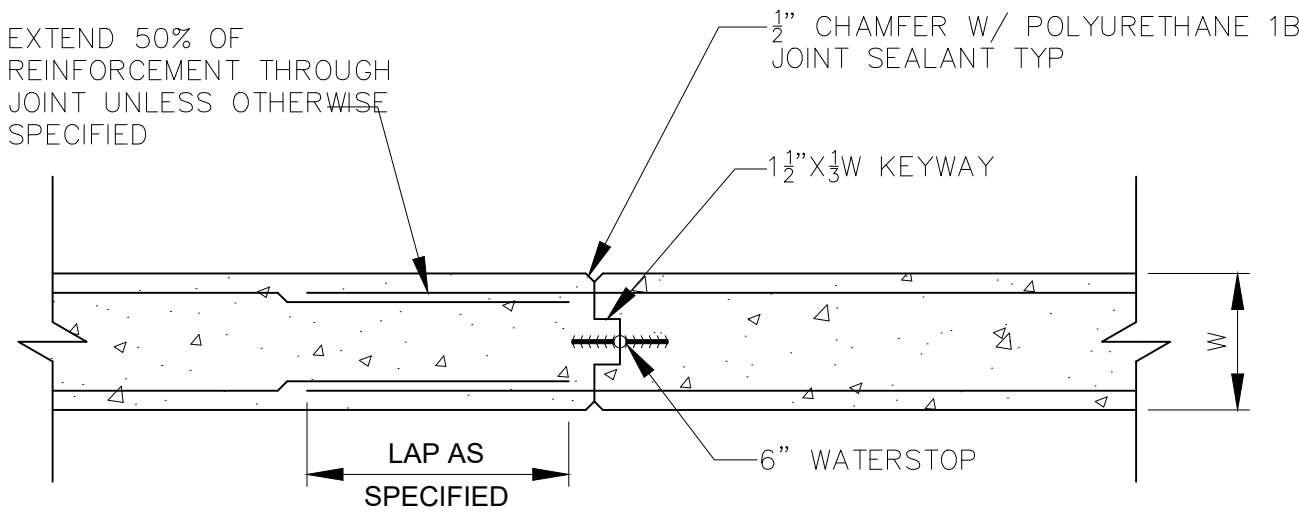
STRUCTURAL STEEL:
1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING MINIMUM ASTM SPECIFICATIONS AND GRADES:

STRUCTURAL STEEL	
WIDE FLANGE SECTIONS	ASTM A-992, GRADE 50 (Fy=50 KSI)
PLATES WHERE NOTED	ASTM A572, GRADE 50 (Fy=50 KSI)
CHANNELS, ANGLES, PLATES--EXCEPT AS NOTED	ASTM A-36 (Fy=36 KSI)
HOLLOW STRUCTURAL SECTIONS (TUBES)	A-500, GRADE B (Fy=46KSI)
PIPE	ASTM A53, TYPE E OR S (Fy=35 KSI)

2. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE," WITH EXCEPTIONS AS NOTED IN THE PROJECT SPECIFICATIONS.
3. BOLTS SHALL CONFORM TO THE ASTM AND RCSC SPECIFICATIONS FOR JOINTS USING A325 OR A490 HIGH STRENGTH BOLTS. BOLTS SHALL BE SNUG TIGHT UNLESS NOTED OTHERWISE.
4. WELDING SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDED PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
5. FOR COMPLETE JOINT PENETRATION WELDS ASSOCIATED WITH MEMBER SPLICES AND CONNECTIONS NOT PART OF THE SLRS, WELDS SHALL BE MADE WITH FILLER METAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT 40 DEGREES F.
6. WELDS SHALL BE MADE USING E70XX ELECTRODES AND SHALL BE 3/16" MINIMUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE BETWEEN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS TO PRODUCE THE SHOP DRAWINGS.
8. PROVIDE NON-SHRINK GROUT UNDER ALL BASE PLATES. GROUT SHALL BE FACTORY-PACKAGED, 6000 PSI MINIMUM AT 28 DAYS AND SHALL COMPLY WITH ASTM C 1107.
9. PROVIDE WEEP HOLES AT ALL EXTERIOR CLOSED SECTIONS WHERE MOISTURE MAY ACCUMULATE.

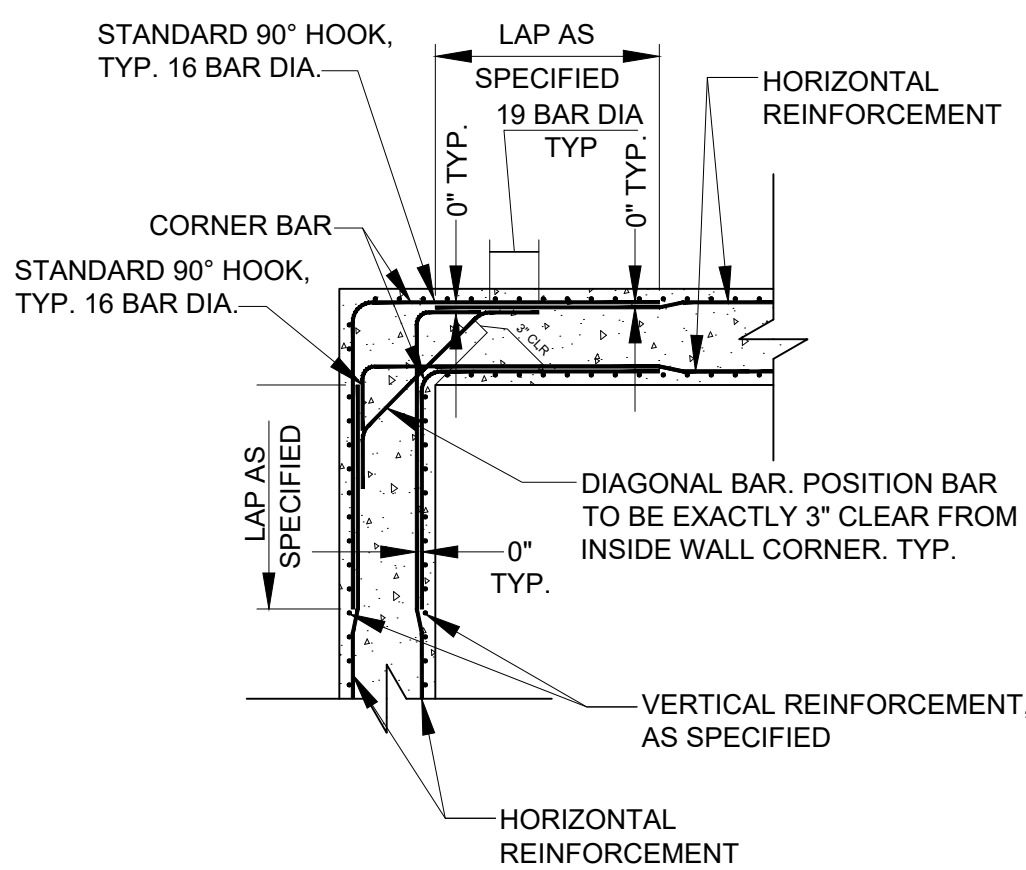
ABBREVIATIONS

&	AND	HP	HIGH POINT
@	AT	IF	INSIDE FACE
#X@Y	BAR SIZE AND SPACING IN INCHES	LP	LOW POINT
±	FIELD VERIFY	MFG R	MANUFACTURER
↑	VERIFY W/EQUIPMENT	NF	NEAR FACE
↘	SLOPE (DOWN DIRECTION) 1/4" FT UNO	NTS	NOT TO SCALE
ALUM	ALUMINUM	O.C.	ON CENTER
B OR BOT	BOTTOM	REQ'D	REQUIRED
B/	BOTTOM OF	SQ	SQUARE
CL	CLEAR	SS	STAINLESS STEEL
CLR	CLEAR	STL	STEEL
CMU	CONCRETE MASONRY UNIT	T	TOP
CTR	CENTER	T/	TOP OF
DIA	DIAMETER	T.O.C	TOP OF CONCRETE
DWL	DOWEL	T.O.S	TOP OF SLAB
EF	EACH FACE	T.O.W	TOP OF WALL
EW	EACH WAY	TYP	TYPICAL
F.O	FACE OF	VERT	VERTICAL
EL	ELEVATION	W/	WITH
FRP	FIBER REINFORCED PLASTIC	WS	WATERSTOP
FTG	FOOTING	WS	WALL SLEEVE
GTR	GRATING	WWR	WELDED WIRE
HORZ	HORIZONTAL		REINFORCEMENT



CONSTRUCTION JOINT DETAIL DOUBLE MAT

SCALE: NTS



TYPICAL HYDRAULIC STRUCTURES CORNER REINFORCING DETAILS

SCALE: NTS

NOTE: SIZE AND SPACING OF DIAGONAL AND CORNER BARS TO MATCH HORIZONTAL REINFORCING. EXTENSION ARM OF DIAGONAL BARS TO BE IN SAME PLANE AS WALL HORIZONTAL REINFORCEMENT. ALL HORIZONTAL BARS TO BE EQUALLY SPACED VERTICALLY.

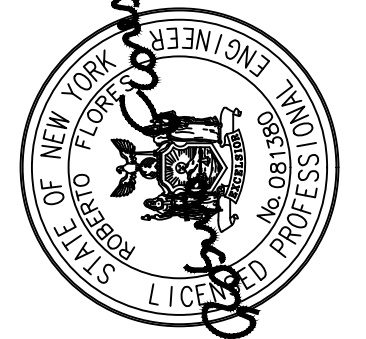
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BID PLANS

GENERAL
STRUCTURAL NOTES

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DATE DESCRIPTION





**DELAWARE
ENGINEERING, D.P.C.**

CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290

55 SOUTH MAIN ST ONEONTA, NY 13820 - 607.432.8073

311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290

16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290

548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE:	01/22
DRAWN BY:	YB
SCALE:	AS SHOWN
REVIEWED BY:	RF
PROJECT NO.:	19-1843
FILE:	

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SHEET:
SN2

File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\PUMP STATION C DRAWINGS STRUCTURAL--REDWG Saved: 11/2/2021 2:56:02 PM Plotted: 1/21/2022 3:53:28 PM User: Kyle Muller LastSavedBy: mullek

SPECIAL INSPECTIONS AND TESTING:

1. SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE IBC AS SUMMARIZED IN THE SPECIAL INSPECTION AND TESTING PROGRAM ON THIS SHEET. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

TABLE 1					
REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
SOILS					
GEOTECHNICAL INVESTIGATIONS	TABLE 1705.6 1803				GEOTECHNICAL INVESTIGATION SHALL INCLUDE ITEMS OF SPECIAL INSPECTION AND TESTING AS NOTED IN TABLE 5 OF THE GUIDELINES
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	TABLE 1705.6 1803.5.1			X	TESTING OF COMPACTED FILL MATERIALS (SEE TABLE 5)
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	TABLE 1705.6		X		BY THE GEOTECHNICAL ENGINEER
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	TABLE 1705.6			X	BY THE GEOTECHNICAL ENGINEER

TABLE 2					
REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
FABRICATORS					
FABRICATORS	1704.2.5			X	SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP.
	1704.2.5.1				THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES AND SHALL REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENT.
	1704.2.5.2				SPECIAL INSPECTIONS REQUIRED BY SECTION 1705 ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY A NATIONALLY RECOGNIZED ACCREDITING AUTHORITY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
CONCRETE (TABLE 3)					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1909.1 TABLE 1705.3	ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE
REINFORCING STEEL PLACEMENT	1705.3 1910.4 1901.3.2	ACI 318: 3.5 ACI 318: 7.1-7.7		X	TOLERANCES AND REINFORCING PLACEMENT PER ACI 7.5; SPACING LIMITS FOR REINFORCING ACI 7.6 PROTECTION OF REINFORCEMENT PER ACI 7.7
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1705.3 1904 1904.2 1910.2 1910.3	ACI 318: CHAPTER 4 ACI 318: 5.2-5.4		X	
CONCRETE PLACEMENT	TABLE 1705.3	ACI 318: 1.3.2.D ACI 318: 5.9 - 5.10	X		
CONCRETE CURING	TABLE 1705.3 1910.9.1-3	ACI 318: 5.11-5.13		X	
VERIFICATION OF FORMWORK	TABLE 1705.3	ACI 318: 6.1.1		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED

TABLE 5					
REQUIRED TESTING FOR SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	TESTING				REMARKS
	IBC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
CONCRETE					
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	TABLE 1705.3	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	X		FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED ONCE EACH DAY FOR A GIVEN CLASS OF CONCRETE, OR LESS THAN ONCE FOR EACH 150 YDS OF CONCRETE, OR LESS THAN ONCE FOR EACH 5,000 FT2 OF SURFACE AREA FOR SLABS/WALLS. ONCE EACH SHIFT FROM IN-PLACE WORK OR FROM TEST PANEL AND MINIMUM ONE SPECIMEN FOR EACH 50 CUBIC YARDS. "PRECONSTRUCTION TESTS AS REQUIRED PER THE BUILDING OFFICIAL."
CONCRETE STRENGTH	TABLE 1705.3	ASTM C39	X		
CONCRETE SLUMP	TABLE 1705.3	ASTM C143	X		
CONCRETE AIR CONTENT		ASTM C231	X		
CONCRETE TEMPERATURE		ASTM C1064	X		

SUBMITTALS:

1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE FABRICATION AND CONSTRUCTION OF ALL STRUCTURAL ITEMS INCLUDING THE FOLLOWING ITEMS IN ADDITION TO INDIVIDUAL SPECIFICATION SECTIONS.

SUBMITTALS			
ITEM	SUBMITTAL (A, D)	DEFERRED SUBMITTAL (B, D)	COMMENTS
CONCRETE MIX DESIGNS	X		
CONCRETE REINFORCEMENT	X		
REINFORCING STEEL MILL CERTS	X		
CONCRETE ANCHORAGES	X		
HOLDOWN ANCHOR BOLT LAYOUT	X		
EMBEDDED STEEL ITEMS	X		
SLAB-ON-GRADE CONTROL JOINT LAYOUT	X		
STRUCTURAL STEEL MILL CERTS	X		
STRUCTURAL STEEL	X		
STEEL WELDING PROCEDURES	X		
STEEL FASTENERS	X		
MEP ANCHORAGE AND BRACING	X	X	FOOTNOTE "C"
PRE-ENGINEERED METAL STAIRS	X	X	

- A. IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE. ANY MODIFICATIONS TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.
- B. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE. CALCULATIONS SHALL BE INCLUDED FOR ALL CONNECTIONS TO THE STRUCTURE CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED UPON THE REQUIREMENTS OF THE IBC AND AS NOTED UNDER "DESIGN CRITERIA."
- C. THE CONTRACTOR SHALL COORDINATE THE SEISMIC RESTRAINTS OF MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO ASCE 7-10 CHAPTER 13 AND BE DESIGNED BY AN ENGINEER REGISTERED IN NEW YORK STATE.
- D. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM, OR ADD TO, THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN NEW YORK STATE AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO CONSTRUCTION. ANY SUCH DETAILS ARE SUBJECT TO REVIEW AND ACCEPTANCE BY THE STRUCTURAL ENGINEER OF RECORD.

DATE: 01/22

DRAWN BY: YB

SCALE: AS SHOWN

REVIEWED BY: RF

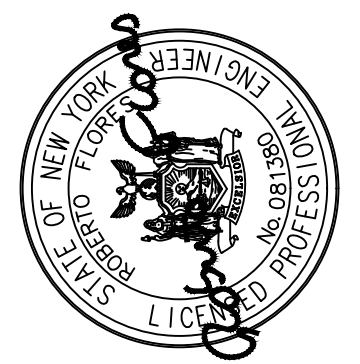
PROJECT NO.: 19-1843

FILE:

DELAWARE
ENGINEERING, D.P.C.



CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518-452.1290
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518-452.1290
548 BROADWAY, MONTICELLO, NY 12051 - 845-791.7777



REVISIONS		DESCRIPTION							
NO.	DATE								

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SPECIAL INSPECTIONS

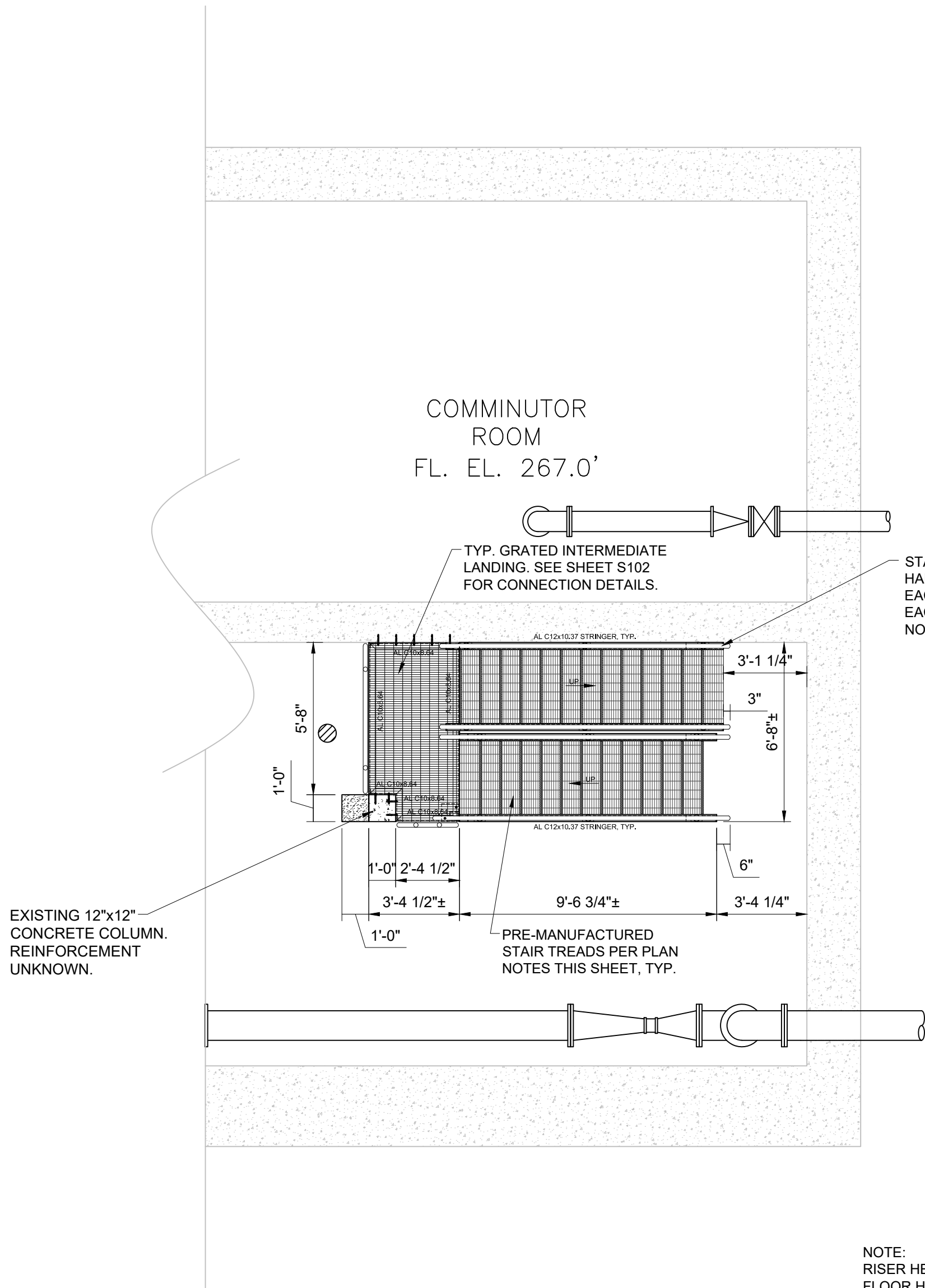
SHEET:
SN3

BID PLANS

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File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\PUMP STATION C DRAWINGS\STRUCTURAL-YELDWG Saved: 11/2/2021 2:56:02 PM Plotted: 1/2/2022 3:53:29 PM User: Kyle Muller LastSavedBy: mullek

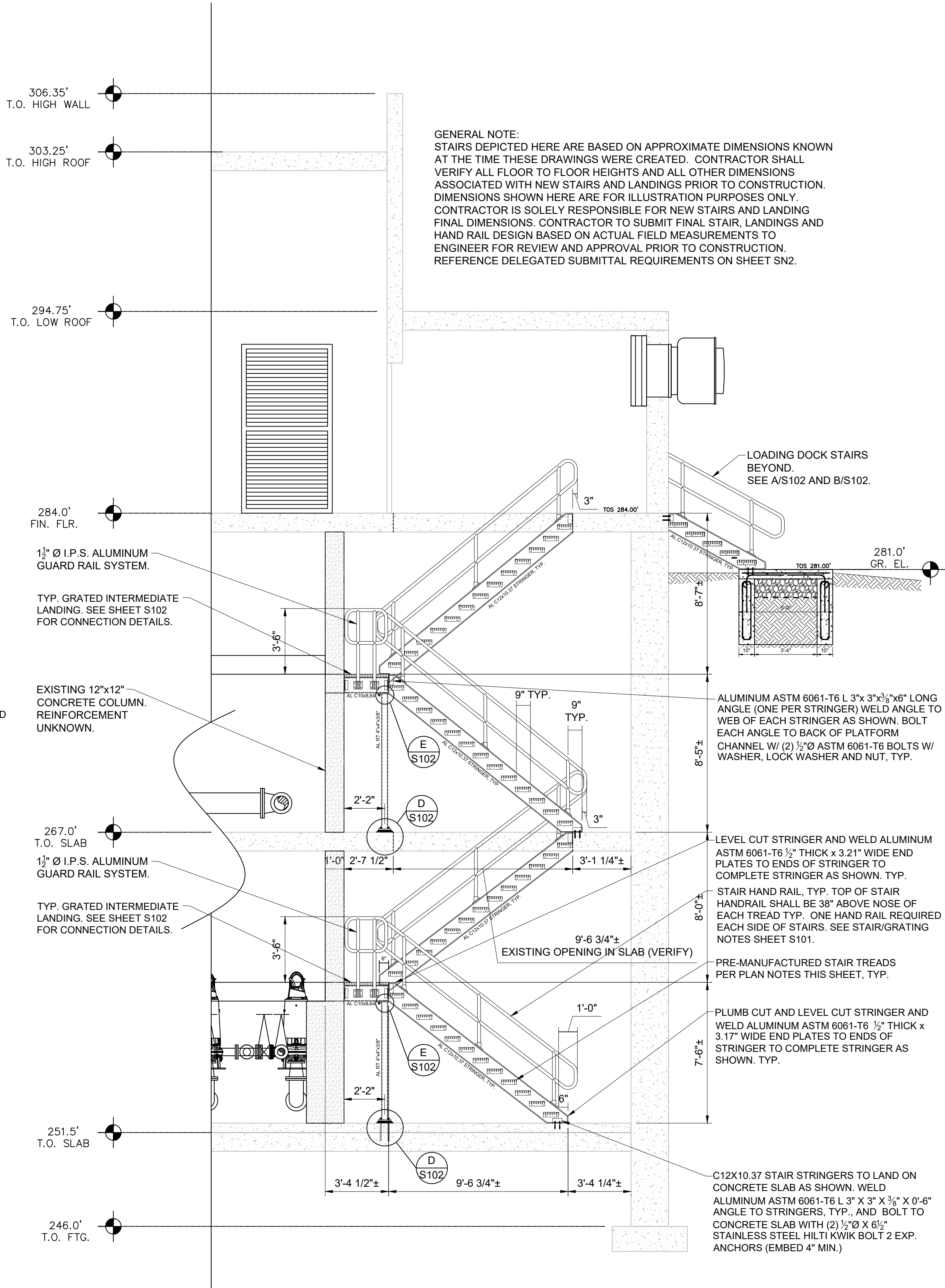
- STAIR/GRATING NOTES:
- ALL STAIR STRINGERS SHALL BE ASTM 6061-T6 ALUMINUM. STAIR TREADS SHALL BE MCNICHOLS CO. OR EQUAL ALUMINUM (GAL SERIES) PRE-MANUFACTURED $9\frac{1}{2}" \times 3"$, RECTANGULAR BAR STAIR TREADS WITH $1\frac{1}{2}" \times \frac{3}{8}"$ BEARING BARS WITH SERRATED FINISH AS MANUFACTURED BY MCNICHOL'S CO. OR EQUAL.
 - ALL NON STAIR SUPPORT BEAMS AND SUPPORTS SUCH AS CHANNELS SHALL BE ASTM 6061-T6 ALUMINUM.
 - ALL BOLTS CONNECTING ALUMINUM MEMBERS TO OTHER ALUMINUM MEMBERS SHALL BE ASTM 6061-T6 AND SHALL BE INSTALLED W/ NUT AND WASHER OF THE SAME TYPE AND GRADE OF ALUMINUM.
 - ALL EXPANSION ANCHORS SHALL BE STAINLESS STEEL ASTM A304 HILTI KWIK BOLT 3 OR EQUAL OF SIZE AND LENGTH SHOWN ON DRAWINGS. ALL EXPANSION ANCHORS TO BE INSTALLED W/ APPROPRIATE STAINLESS STEEL NUT, WASHER AND LOCK WASHER OF THE SAME TYPE AND GRADE.
 - ALL FLOOR GRATES SHALL BE ALUMINUM ALLOY ASTM 6061-T6 AND SHALL BE OF RECTANGULAR I BAR CONFIGURATION. MCNICHOLS CO. MODEL NO. GAL-200 (19SG4) OR APPROVED EQUAL. DEPTH OF BEARING BARS SHALL BE 2" DEEP $\times \frac{3}{8}"$ WIDE. FINISH SHALL BE MILL FINISH AS PER "OHIO GRATINGS" 19SG4 OR EQUAL. SURFACE TO BE SERRATED. ALL GRATING TO BE FASTENED TO SUPPORTING MEMBERS BY THE USE OF ALUMINUM DEVICES SUCH AS SADDLE CLIPS, GRATING CLAMPS, COUNTERSUNK LANDS, Z CLIPS OR ANCHOR BLOCKS, AS NECESSARY TO SECURE GRATING TO SUPPORTING MEMBERS OR PREPARED OPENINGS. SHOP DRAWINGS DETAILING FINAL GRATING DESIGN AND LAYOUT INCLUDING ALL STAIRS AND LANDINGS AS WELL AS HANDRAILS AND GUARD RAILS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
 - ALL GUARD RAILS FOR NEW CONSTRUCTION SHALL BE COMPRISED OF $1\frac{1}{2}"$ I.P.S. SCHEDULE 40 ALUMINUM ALLOY ASTM 6061-T6 AND FASTENED TO SUPPORTING MEMBERS WITH EITHER WALL MOUNT FLANGE SUCH AS HOLLEANDER MODEL NO. 52E OR EQUAL, OR BASE SUPPORTS OF TYPE HOLLAENDER 52HD OR APPROVED EQUAL. VERTICAL GUARD RAIL/ HAND RAIL SUPPORTS SHALL NOT EXCEED 5'-0" O.C. SPACING. A 4" ALUMINUM ASTM 6061-T6 BEVELED TOE BOARD (HOLLEANDER MODEL #94102 OR EQUAL) SHALL BE INCLUDED ALONG THE BASE OF ALL GUARD RAILS AND SHALL BE INSTALLED W/ NO MORE THAN A $\frac{1}{4}"$ GAP BETWEEN TOP OF GRATE AND TOE BOARD. CONTRACTOR SHALL PROVIDE ALL HAND AND GUARD RAIL APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION.
 - ALL STRUCTURAL WELDS CONNECTING MEMBERS COMPRISED OF ALUMINUM ALLOY SHALL BE WELDED WITH ARC OR RESISTANCE WELDING PROCESS. NO WELDING PROCESS THAT REQUIRES THE USE OF A WELDING FLUX SHALL BE USED. THE FILLER METAL SHALL BE ALUMINUM ALLOY 4043 (ASTM DESIGNATION S5B).5154 (ASTM DESIGNATION GR40A) OR OTHER APPROVED ALLOY CAPABLE OF MEETING QUALIFICATION TEST REQUIREMENTS. ALL WELDING OF ALUMINUM SHALL BE PERFORMED BY A QUALIFIED CERTIFIED WELDER.
 - ALL MECHANICAL ELEMENTS SHOWN ON S DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR MUST COORDINATE ALL DRAWINGS TOGETHER.



NEW PUMP STATION INTERIOR STAIRS (TYP. PLAN VIEW)

SCALE: 1/4"=1'-0"

A
S101



NEW PUMP STATION INTERIOR STAIRS (SECTION VIEW)

SCALE: 1/4"=1'-0"

B
S101

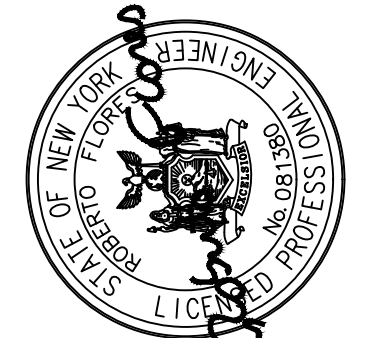
GENERAL NOTE:
STAIRS DEPICTED HERE ARE BASED ON APPROXIMATE DIMENSIONS KNOWN AT THE TIME THESE DRAWINGS WERE CREATED. CONTRACTOR SHALL VERIFY ALL FLOOR TO FLOOR HEIGHTS AND ALL OTHER DIMENSIONS ASSOCIATED WITH NEW STAIRS AND LANDINGS PRIOR TO CONSTRUCTION. DIMENSIONS SHOWN HERE ARE FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR IS SOLELY RESPONSIBLE FOR NEW STAIRS AND LANDING FINAL DIMENSIONS. CONTRACTOR TO SUBMIT FINAL STAIR, LANDINGS AND HAND RAIL DESIGN BASED ON ACTUAL FIELD MEASUREMENTS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. REFERENCE DELEGATED SUBMITTAL REQUIREMENTS ON SHEET SN2.

DATE: 01/22
DRAWN BY: YB
SCALE: AS SHOWN
REVIEWED BY: RF
PROJECT NO.: 19-1843
FILE:

**DELAWARE
ENGINEERING, D.P.C.**



CIVIL AND ENVIRONMENTAL ENGINEERING
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REVISIONS		DESCRIPTION
NO.	DATE	

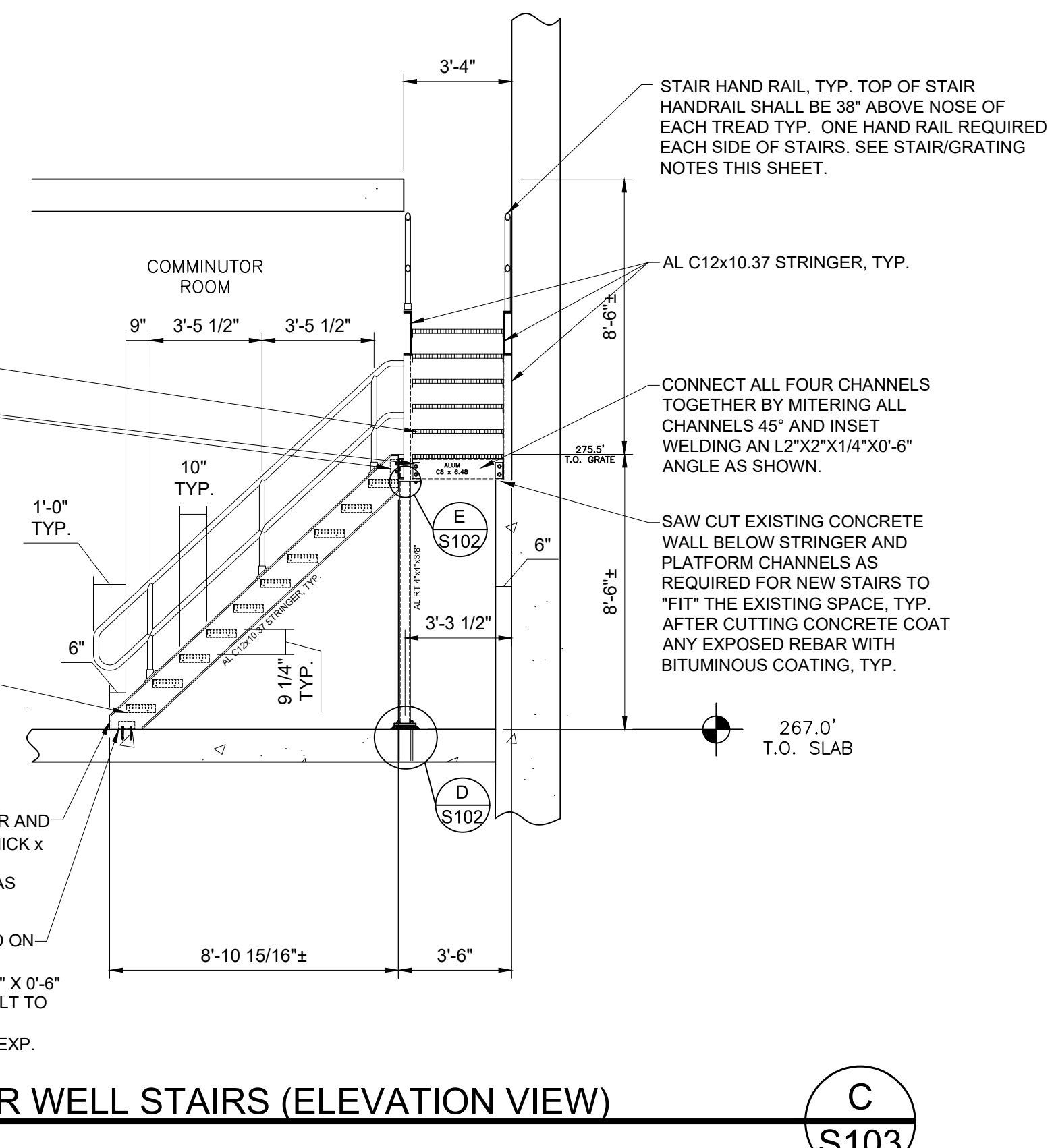
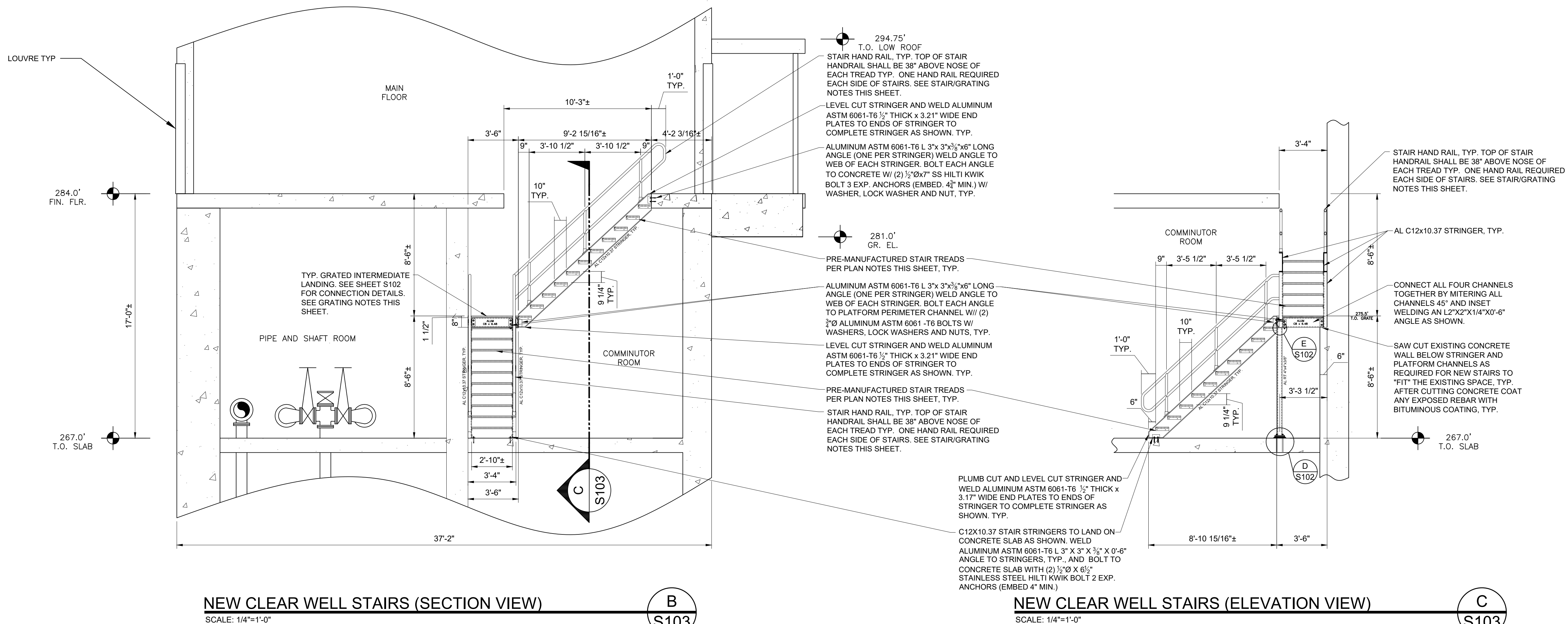
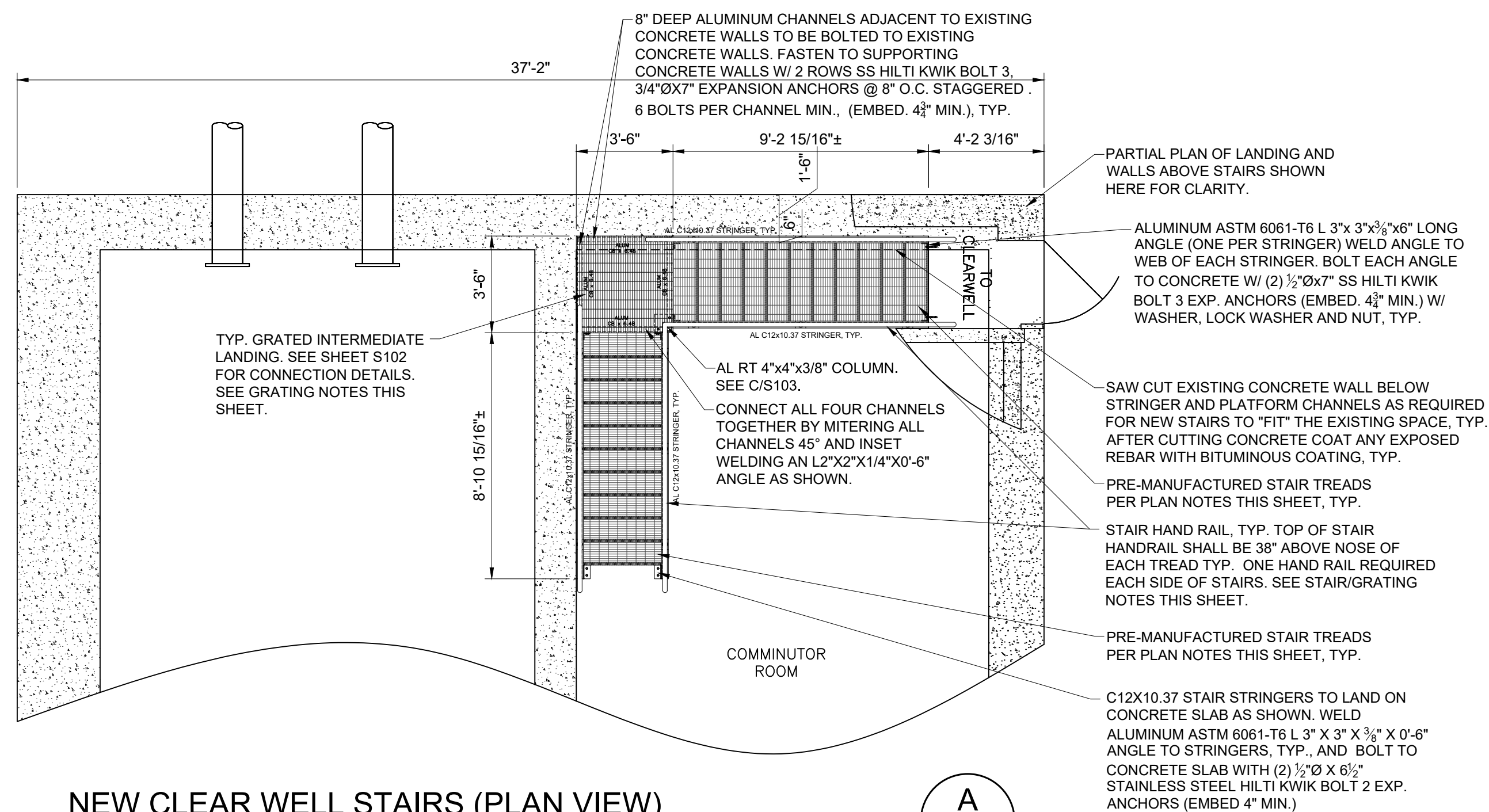
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

NEW PUMP STATION INTERIOR
STAIRS AND GRATED
PLATFORMS
(PLAN AND SECTION)

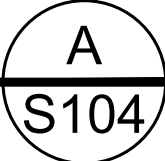
SHEET:
S101

BID PLANS

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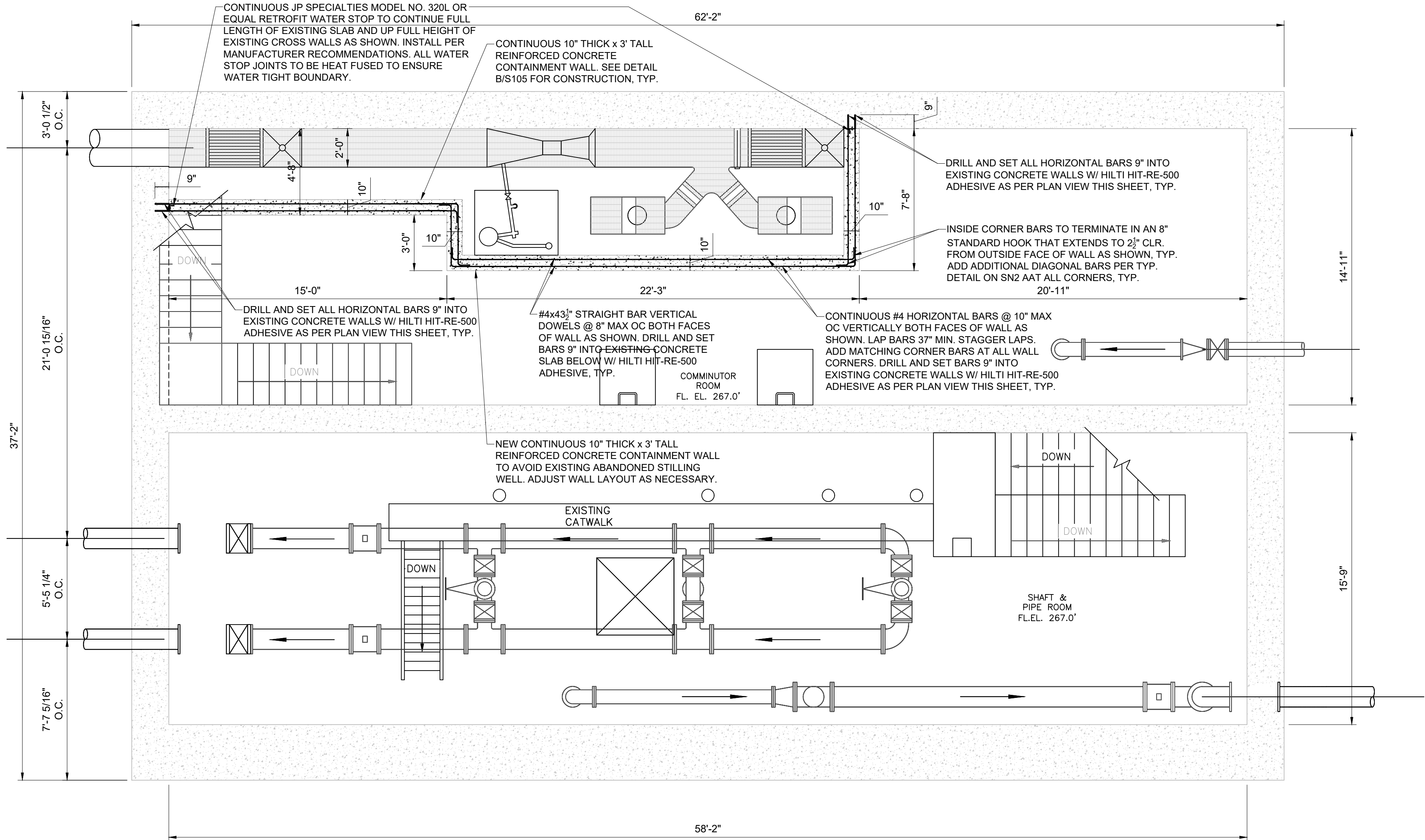


- STAIR/GRATING NOTES:**
1. ALL STAIR STRINGERS SHALL BE ASTM 6061-T6 ALUMINUM. STAIR TREADS SHALL BE MCNICHOLS CO. OR EQUAL ALUMINUM (GAL SERIES) PRE-MANUFACTURED 9 $\frac{3}{4}$ " x 3", RECTANGULAR BAR STAIR TREADS WITH SERRATED 1 $\frac{1}{2}$ " x $\frac{3}{8}$ " BEARING BARS AS MANUFACTURED BY MCNICHOLS CO. OR EQUAL.
 2. ALL NON STAIR SUPPORT BEAMS AND SUPPORTS SUCH AS CHANNELS SHALL BE ASTM 6061-T6 ALUMINUM.
 3. ALL BOLTS CONNECTING ALUMINUM MEMBERS TO OTHER ALUMINUM MEMBERS SHALL BE ASTM 6061-T6 AND SHALL BE INSTALLED W/ NUT AND WASHER OF THE SAME TYPE AND GRADE OF ALUMINUM.
 4. ALL EXPANSION ANCHORS SHALL BE STAINLESS STEEL ASTM A304 HILTI KWIK BOLT 3 OR EQUAL OF SIZE AND LENGTH SHOWN ON DRAWINGS. ALL EXPANSION ANCHORS TO BE INSTALLED W/ APPROPRIATE STAINLESS STEEL NUT, WASHER AND LOCK WASHER OF THE SAME TYPE AND GRADE.
 6. ALL FLOOR GRATES SHALL BE ALUMINUM ALLOY ASTM 6061-T6 AND SHALL BE OF RECTANGULAR I BAR CONFIGURATION, MCNICHOLS CO. MODEL NO. GAL-150 (195G4) OR APPROVED EQUAL DEPTH OF BEARING BARS SHALL BE 1 $\frac{1}{2}$ " DEEP x $\frac{3}{8}$ " WIDE. FINISH SHALL BE SERRATED MILL FINISH AS PER "OHIO GRATINGS" 195G4 OR EQUAL. SURFACE TO BE STRIATED. ALL GRATING TO BE FASTENED TO SUPPORTING MEMBERS BY THE USE OF ALUMINUM DEVICES SUCH AS SADDLE CLIPS, GRATING CLAMPS, COUNTERSUNK LANDS, Z CLIPS OR ANCHOR BLOCKS, AS NECESSARY TO SECURE GRATING TO SUPPORTING MEMBERS OR PREPARED OPENINGS. SHOP DRAWINGS DETAILING FINAL GRATING DESIGN AND LAYOUT INCLUDING ALL STAIRS AND LANDINGS AS WELL AS HANDRAILS AND GUARD RAILS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
 7. ALL GUARD RAILS FOR NEW CONSTRUCTION ASSOCIATED WITH PUMP STATION SHALL BE COMPRISED OF 1 $\frac{1}{2}$ " I.P.S. SCHEDULE 40 ALUMINUM ALLOY ASTM 6061-T6 AND FASTENED TO SUPPORTING MEMBERS WITH EITHER WALL MOUNT FLANGE SUCH AS HOLLANDER MODEL NO. 52E OR EQUAL, OR BASE SUPPORTS OF TYPE HOLLANDER 52HD OR APPROVED EQUAL. VERTICAL GUARD RAIL/ HAND RAIL SUPPORTS SHALL NOT EXCEED 5'-0" O.C. SPACING. A 4" ALUMINUM ASTM 6061-T6 BEVELED TOE BOARD (HOLLANDER MODEL #94102 OR EQUAL) SHALL BE INCLUDED ALONG THE BASE OF ALL GUARD RAILS AND SHALL BE INSTALLED W/ NO MORE THAN A 1/4" GAP BETWEEN TOP OF GRATE AND TOE BOARD. CONTRACTOR SHALL PROVIDE ALL HAND AND GUARD RAIL APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION.
 8. ALL STRUCTURAL WELDS CONNECTING MEMBERS COMPRISED OF ALUMINUM ALLOY SHALL BE WELDED WITH ARC OR RESISTANCE WELDING PROCESS. NO WELDING PROCESS THAT REQUIRES THE USE OF A WELDING FLUX SHALL BE USED. THE FILLER METAL SHALL BE ALUMINUM ALLOY 4043 (ASTM DESIGNATION S5B),5154 (ASTM DESIGNATION GR404) OR OTHER APPROVED ALLOY CAPABLE OF MEETING QUALIFICATION TEST REQUIREMENTS. ALL WELDING OF ALUMINUM SHALL BE PERFORMED BY A QUALIFIED CERTIFIED WELDER.
 9. CONTRACTOR TO IMMEDIATELY CONTACT ENGINEER OF RECORD IF FIELD CONDITIONS INDICATE THAT STAIR STRUCTURE CONNECTIONS TO EXISTING CONCRETE ARE UNFEASIBLE.
 10. ALL MECHANICAL ELEMENTS SHOWN ON S DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR MUST COORDINATE ALL DRAWINGS TOGETHER.



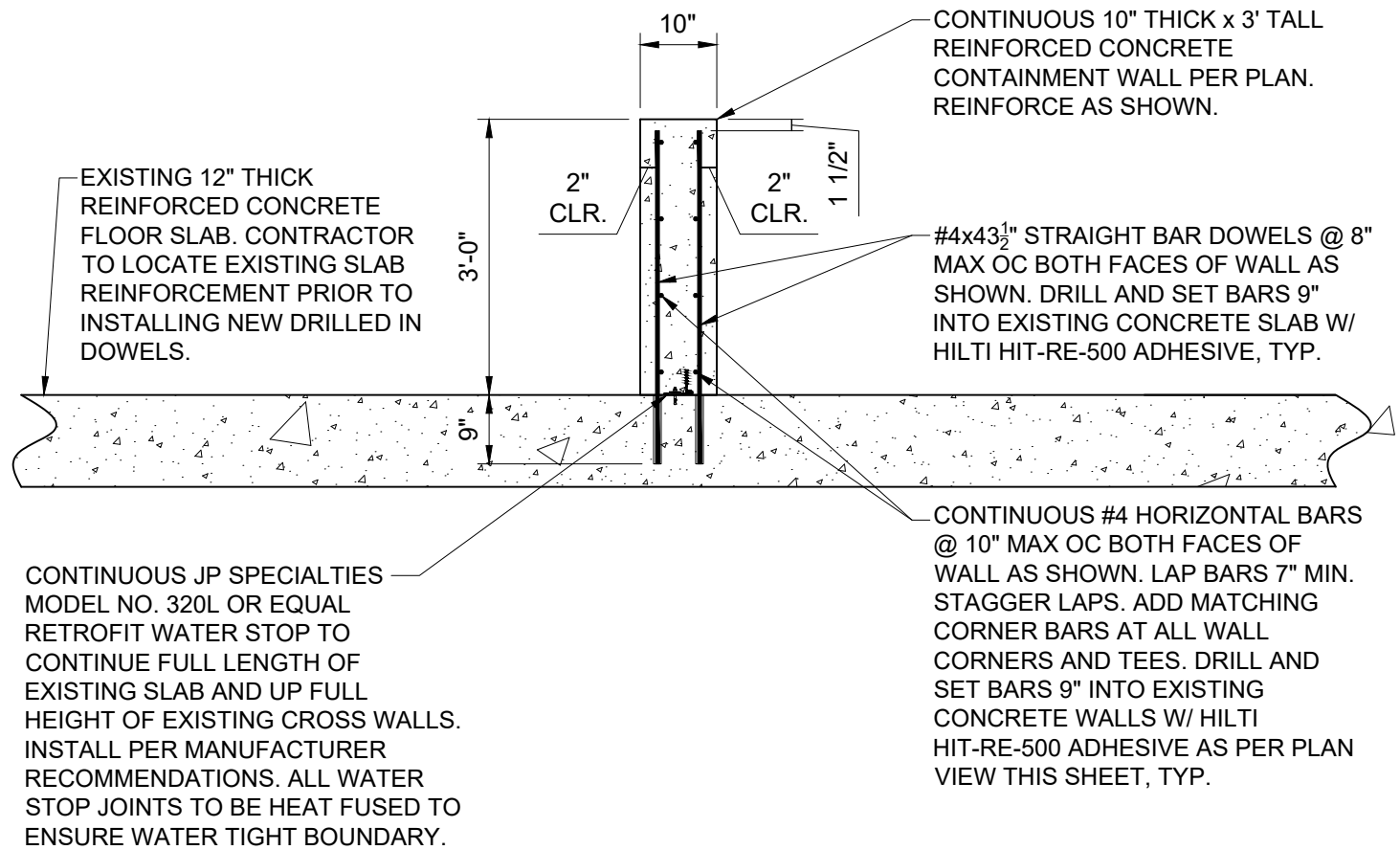
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CONTAINMENT KNEE WALL (PLAN VIEW)
SCALE: 1/4"=1'-0"

A
S105



TYP. KNEE WALL (SECTION)
SCALE: 1/2"=1'-0"

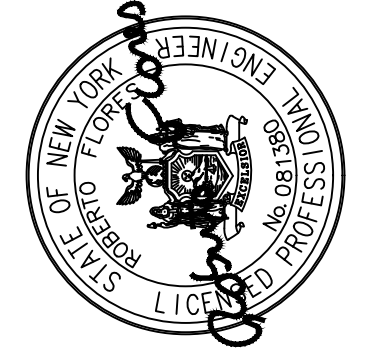
B
S105

BID PLANS

INFLUENT CHANNEL
NEW CONTAINMENT
BOUNDARY KNEE WALL
ADDITION

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		DESCRIPTION
NO.	DATE	



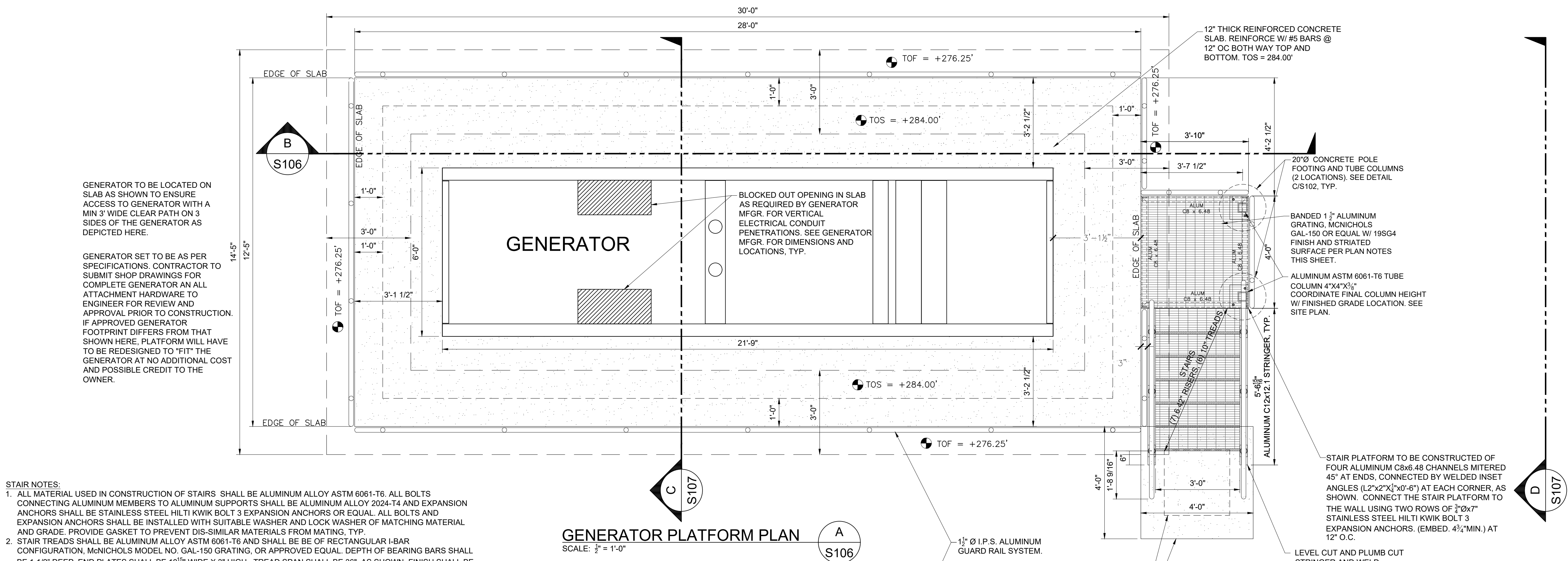
**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING


28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
311 NORTH MAIN STREET, LIBERTY, NY 12543 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777

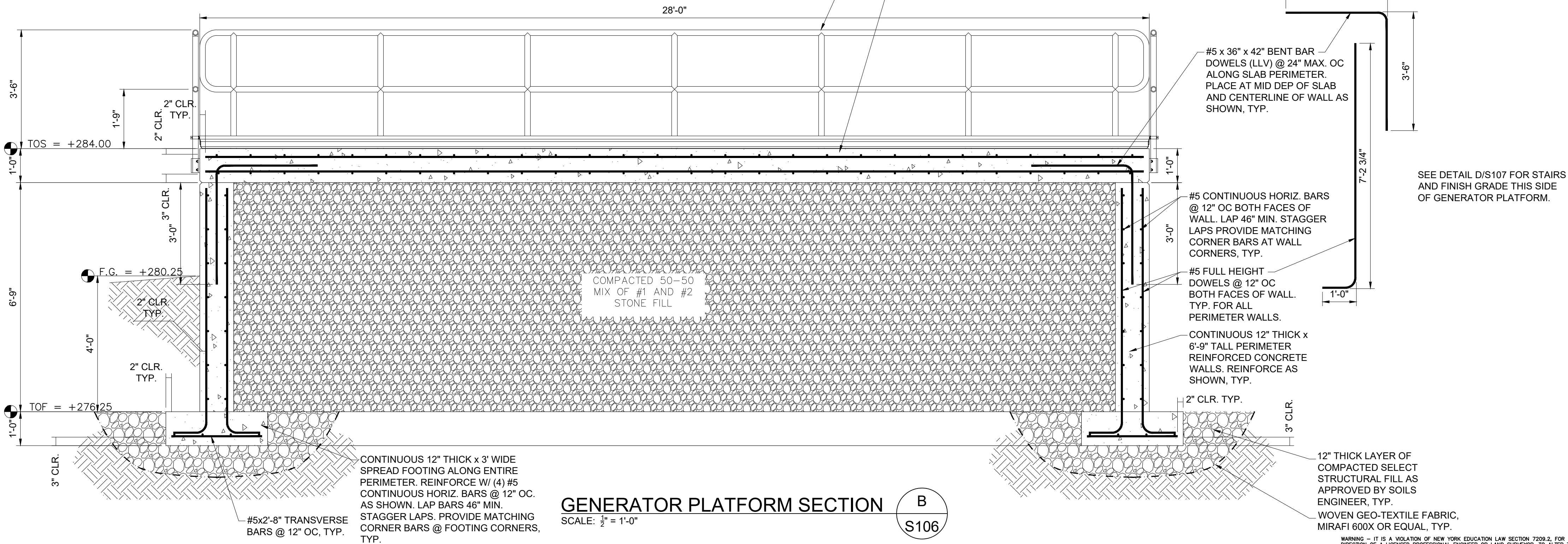
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SCALE:	AS SHOWN
REVIEWED BY:	
PROJECT NO.:	19-1843
FILE:	

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- STAIR NOTES:
1. ALL MATERIAL USED IN CONSTRUCTION OF STAIRS SHALL BE ALUMINUM ALLOY ASTM 6061-T6. ALL BOLTS CONNECTING ALUMINUM MEMBERS TO ALUMINUM SUPPORTS SHALL BE ALUMINUM ALLOY 2024-T4 AND EXPANSION ANCHORS SHALL BE STAINLESS STEEL HILTI KWIK BOLT 3 EXPANSION ANCHORS OR EQUAL. ALL BOLTS AND EXPANSION ANCHORS SHALL BE INSTALLED WITH SUITABLE WASHER AND LOCK WASHER OF MATCHING MATERIAL AND GRADE. PROVIDE GASKET TO PREVENT DIS-SIMILAR MATERIALS FROM MATING, TYP.
 2. STAIR TREADS SHALL BE ALUMINUM ALLOY ASTM 6061-T6 AND SHALL BE BE OF RECTANGULAR I-BAR CONFIGURATION, McNICHOLS MODEL NO. GAL-150 GRATING, OR APPROVED EQUAL. DEPTH OF BEARING BARS SHALL BE 1-1/2" DEEP. END PLATES SHALL BE 10¹⁶/₃₂" WIDE X 3" HIGH. TREAD SPAN SHALL BE 36", AS SHOWN. FINISH SHALL BE MILL FINISH AS PER "OHIO GRATINGS" 19-SG-4 OR EQUAL. SURFACES TO BE STRIATED.
 3. ALL GUARD RAILS SHALL BE COMPRISED OF 1-1/2" I.P.S. SCHEDULE 40 ALUMINUM ALLOY ASTM 6061-T6 AND FASTENED TO SUPPORTING MEMBERS WITH EITHER WALL MOUNT FLANGE OR BASE SUPPORTS OF TYPE HOLLAENDER OR APPROVED EQUAL. VERTICAL GUARD RAIL/ HAND RAIL SUPPORTS SHALL NOT EXCEED 5'-0" O.C. SPACING.
 4. ALL STRUCTURAL WELDS CONNECTING MEMBERS COMPRISED OF ALUMINUM ALLOY SHALL BE WELDED WITH ARC OR RESISTANCE WELDING PROCESS. NO WELDING PROCESS THAT REQUIRES THE USE OF A WELDING FLUX SHALL BE USED. THE FILLER METAL SHALL BE ALUMINUM ALLOY 4043 (ASTM DESIGNATION S5B), 5154 (ASTM DESIGNATION GR40A), OR OTHER APPROVED ALLOY CAPABLE OF MEETING QUALIFICATION TEST REQUIREMENTS. ALL WELDING OF ALUMINUM SHALL BE PERFORMED BY A QUALIFIED AND CERTIFIED WELDER.
 5. FINAL DESIGN AND LAYOUT OF ALL STAIRS, INCLUDING HANDRAILS AND GUARD RAILS, SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
 6. ANY ELECTRICAL OR PLUMBING CONDUIT THAT PENETRATES STEM WALLS SHALL BE SLEEVED AND LINK SEALED. ANY ELECTRICAL OR PLUMBING CONDUIT BELOW FOOTINGS SHALL BE ENCASED IN CONCRETE OR STEEL DIRECTLY BELOW FOOTING.



GENERATOR PLATFORM SECTION
SCALE: 1/2" = 1'-0"

BID PLANS

REVISIONS	NO.	DATE	DESCRIPTION
SAW MILL PUMP STATION UPGRADES VILLAGE OF MOUNT KISCO WESTCHESTER COUNTY, NY			
NEW GENERATOR SUPPORT STRUCTURE (PLAN AND SECTIONS)			
SHEET: S106			

DATE: 01/22

DRAWN BY: YB

SCALE: AS SHOWN

REVIEWED BY:

PROJECT NO.: 19-1843

FILE:

DELAWARE ENGINEERING, D.P.C.

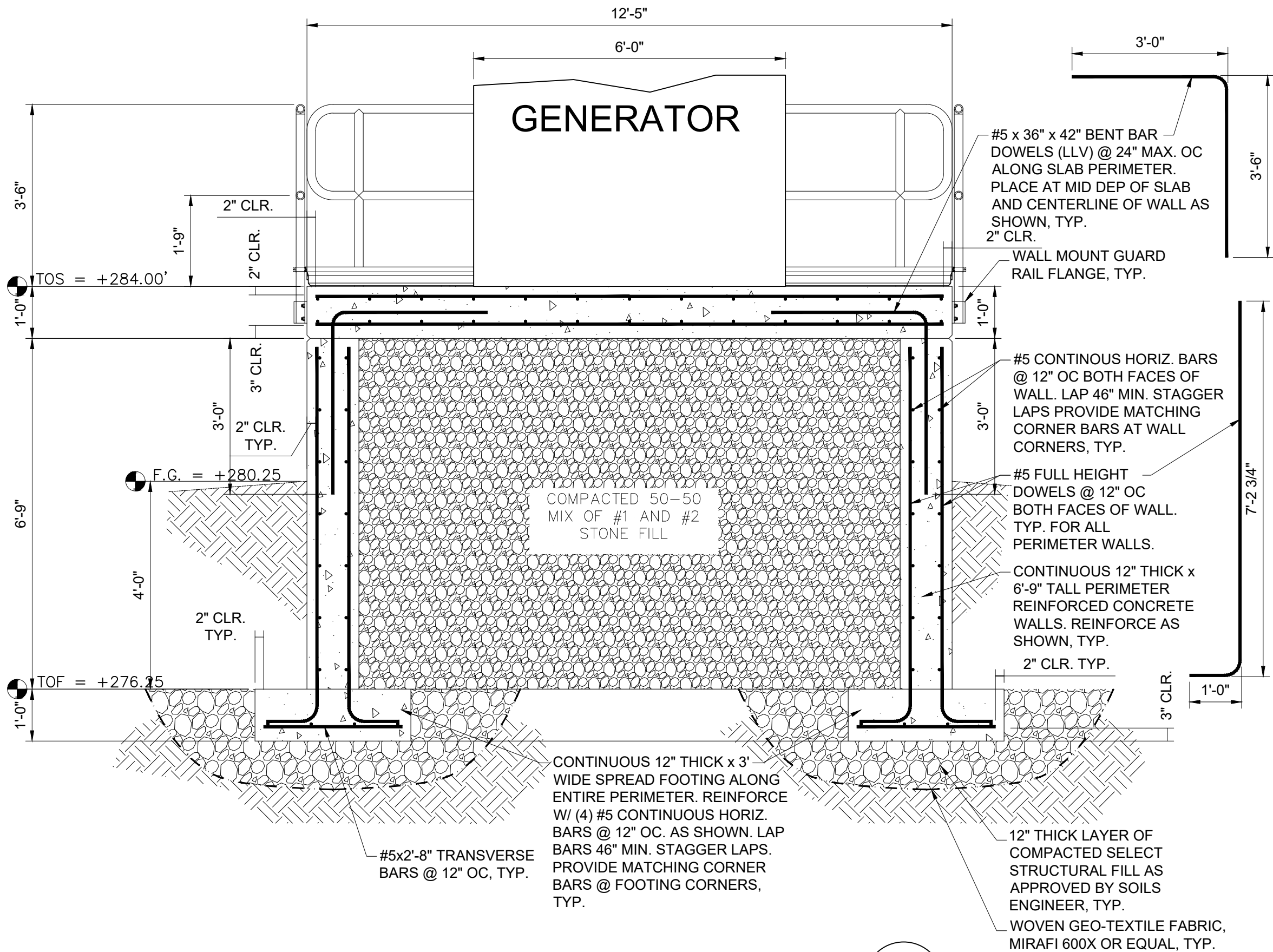
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

STATE OF NEW YORK
Professional Engineer
ROBERTO F. DELAWARE
No. 081980
Exp. 06/30/2024

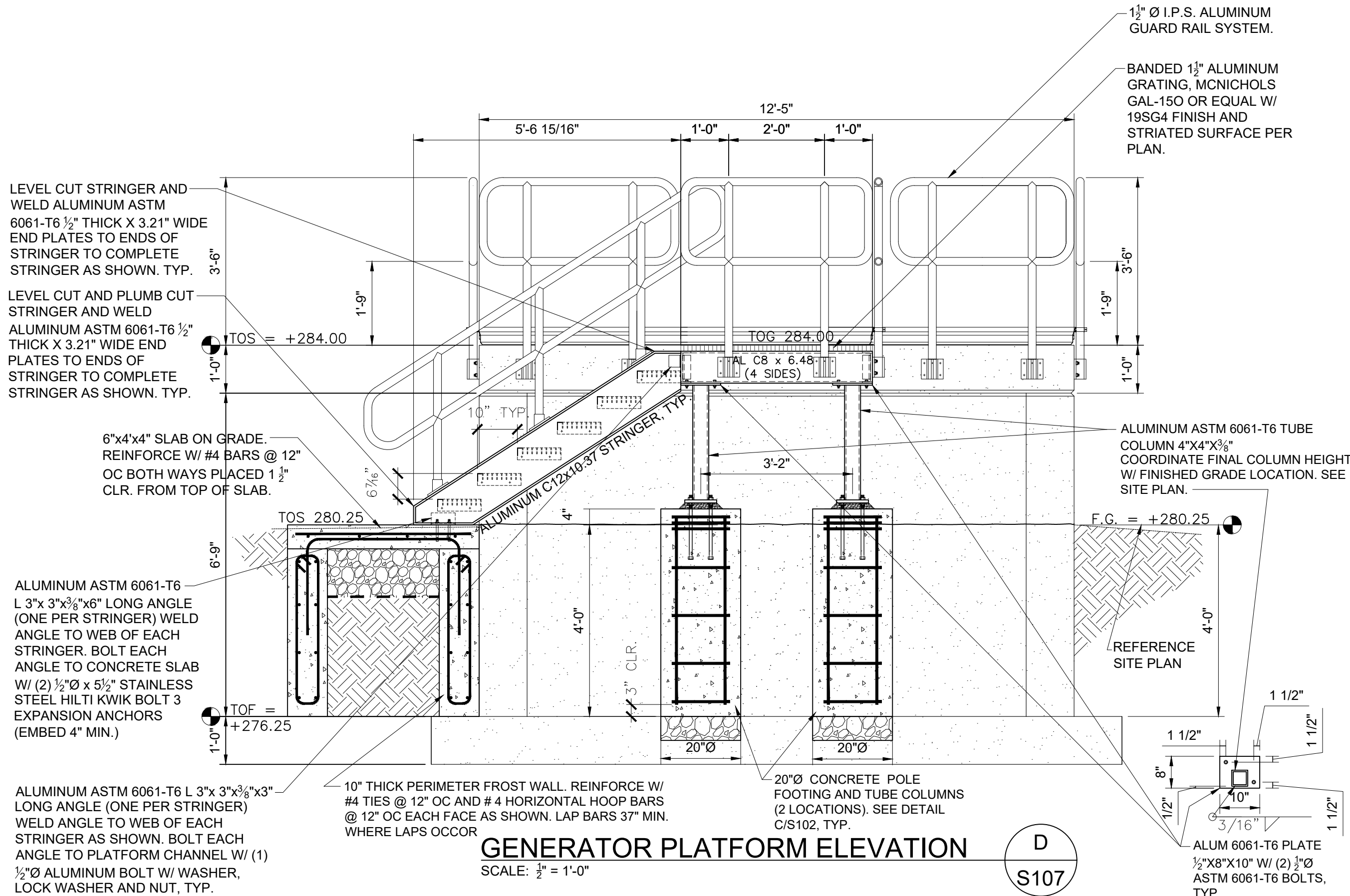
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FILE: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\PUMP STATION C DRAWINGS\STRUCTURAL-YE.DWG Saved: 11/2/2021 2:56:02 PM Plotted: 1/21/2022 3:53:35 PM User: Kyle Muller LastSavedBy: mullek



GENERATOR PLATFORM SECTION
SCALE: $\frac{1}{2}" = 1'-0"$

C
S107



GENERATOR PLATFORM ELEVATION
SCALE: $\frac{1}{2}" = 1'-0"$

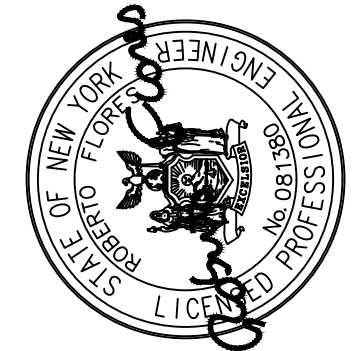
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S107

BID PLANS

NEW GENERATOR SUPPORT
STRUCTURE
(SECTION AND ELEVATION)

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

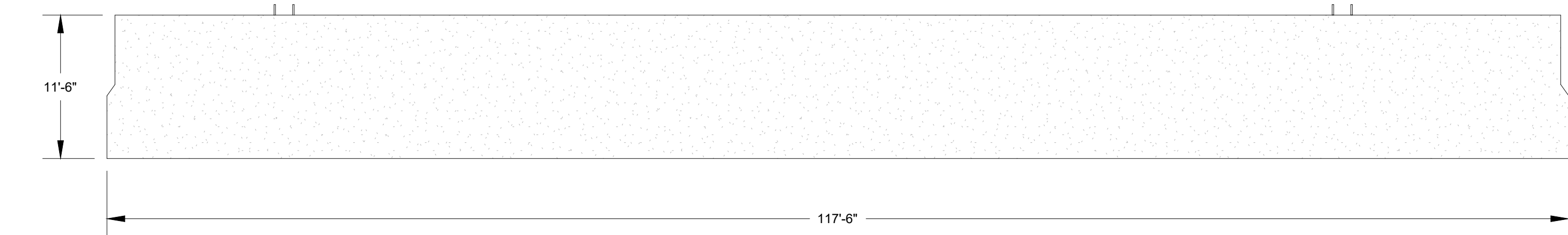
REVISIONS		DESCRIPTION
NO.	DATE	



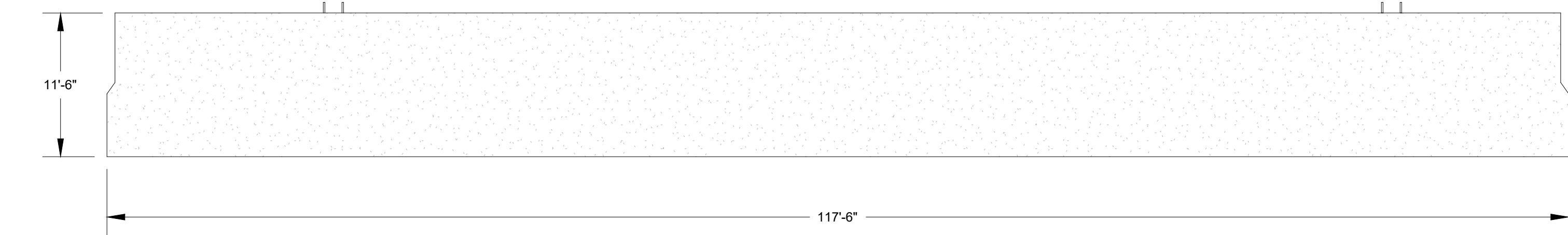
**DELAWARE
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CIVIL AND ENVIRONMENTAL ENGINEERING
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12051 - 845.791.7777

DATE: 01/22
DRAWN BY: YB
SCALE: AS SHOWN
REVIEWED BY:
PROJECT NO.: 19-1843
FILE:

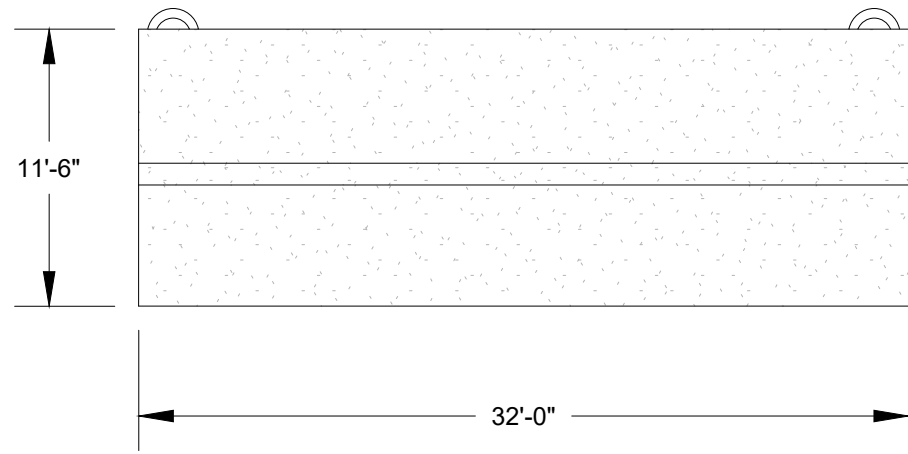
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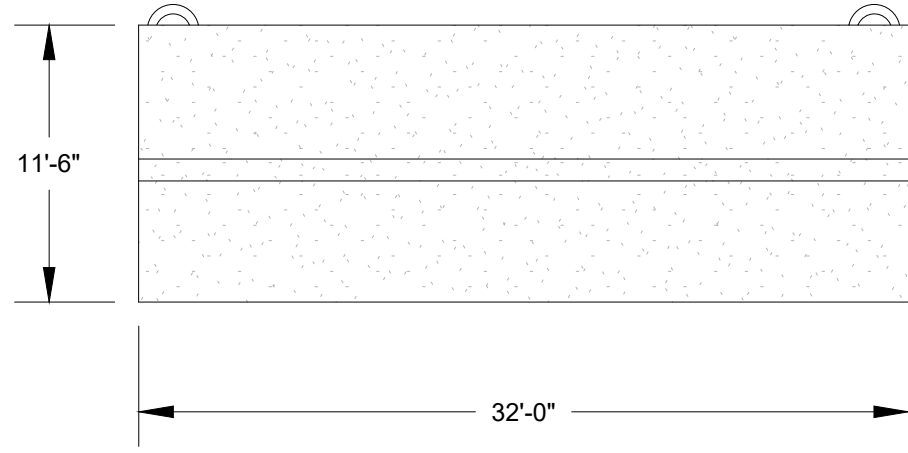
① NORTH WALL EXTERIOR
1/8" = 1'-0"



③ SOUTH WALL EXTERIOR
1/8" = 1'-0"



② EAST WALL EXTERIOR
1/8" = 1'-0"



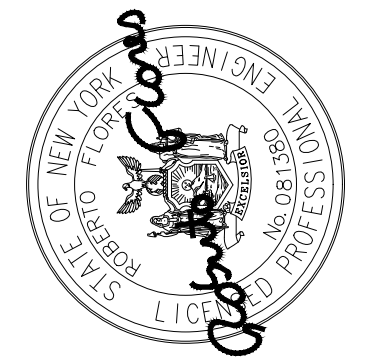
④ WEST WALL EXTERIOR
1/8" = 1'-0"

BID PLANS

EXISTING
OVERFLOW TANK
ELEVATIONS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DESCRIPTION





**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290
110 WEST 10TH STREET, ALBANY, NY 12206 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

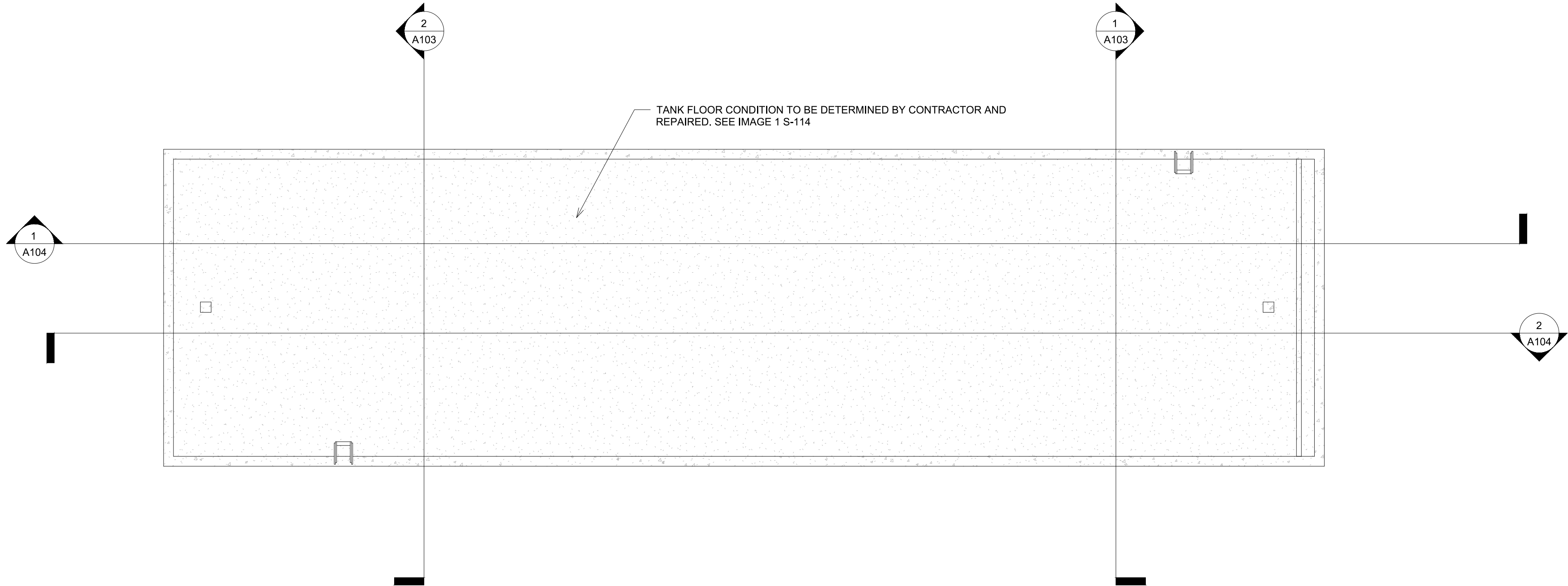
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SCALE:	AS SHOWN
REVIEWED BY:	AH
PROJECT NO.:	19-1843
FILE:	

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SHEET:
S-110

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1 PLAN VIEW
1/8" = 1'-0"



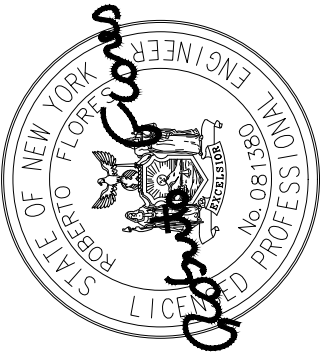
NOTE: CONTRACTOR TO ASSESS TANK AND
VERIFY ALL REPAIR LOCATIONS

BID PLANS

EXISTING
OVERFLOW TANK
PLAN VIEW

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DESCRIPTION



**DELAWARE
ENGINEERING, D.P.C.**

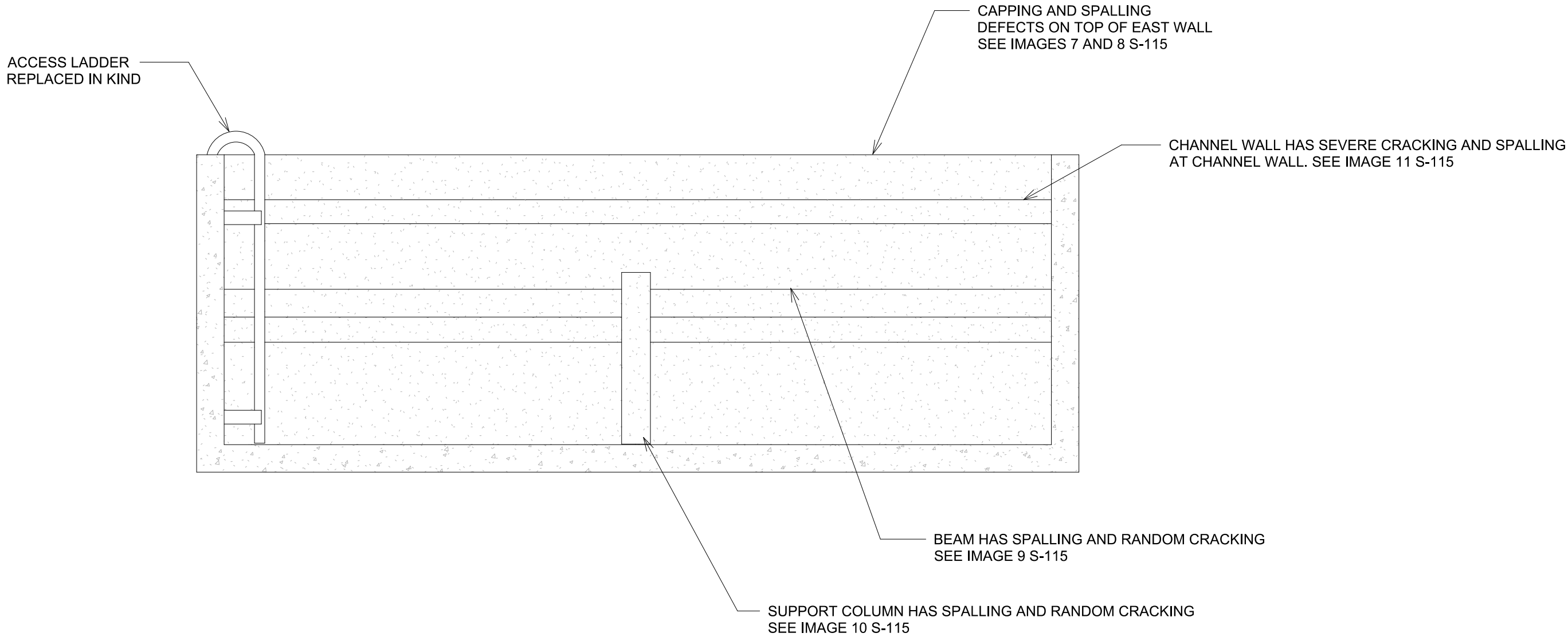
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518-452-1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607-432-8073
311 NORTH MAIN STREET, LIBERTY, NY 12546 - 518-452-1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518-452-1290
548 BROADWAY, MONTICELLO, NY 12701 - 845-791-7777

DATE:	06/21
DRAWN BY:	KMM
SCALE:	AS SHOWN
REVIEWED BY:	AH
PROJECT NO.:	19-1843
FILE:	

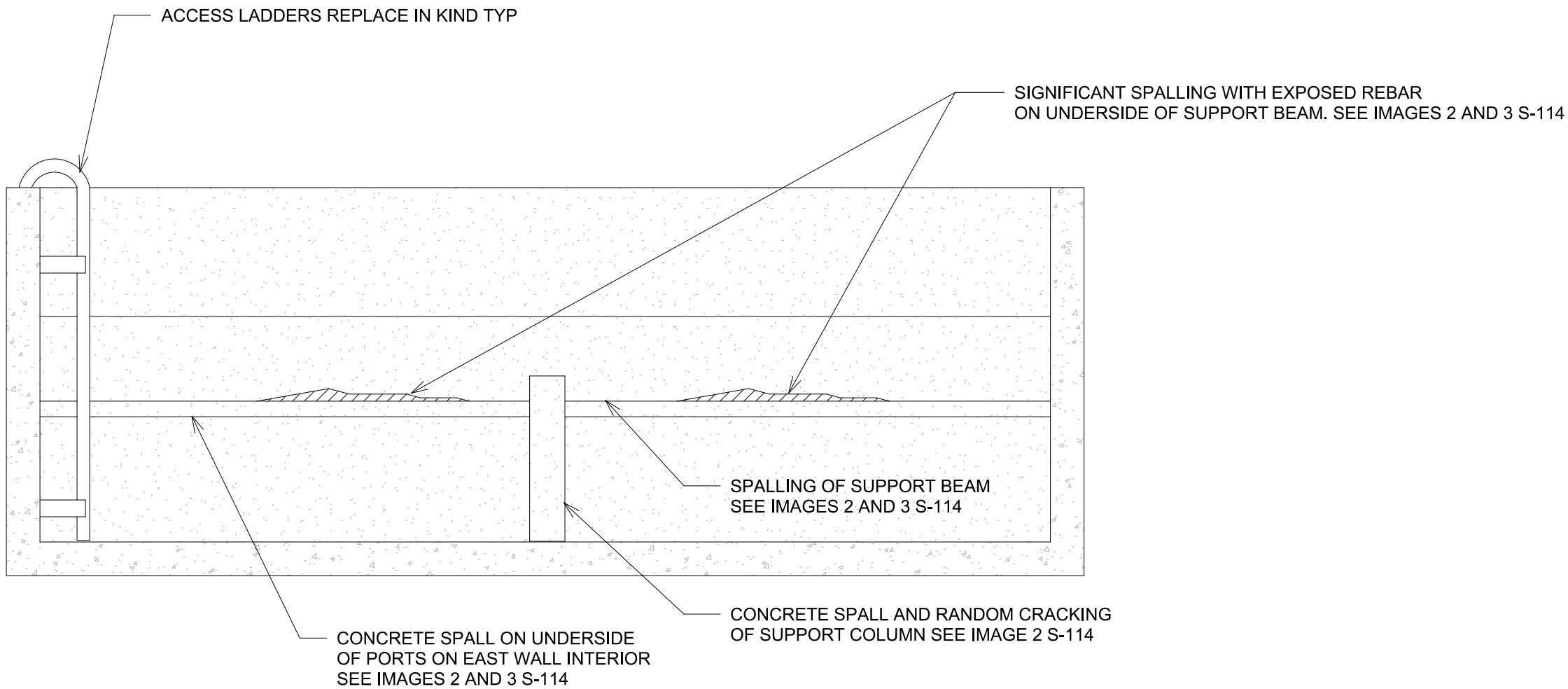
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① EAST WALL INTERIOR
1/4" = 1'-0"



② WEST WALL INTERIOR
1/4" = 1'-0"



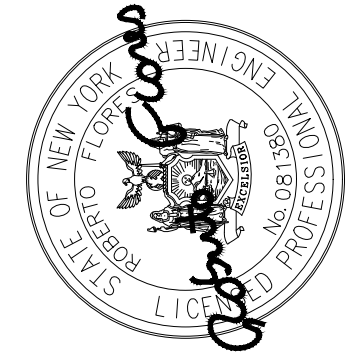
NOTE: CONTRACTOR TO ASSESS TANK AND
VERIFY ALL REPAIR LOCATIONS

BID PLANS

EXISTING
OVERFLOW TANK
STRUCTURAL
IMPROVEMENTS
EAST/WEST

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DESCRIPTION



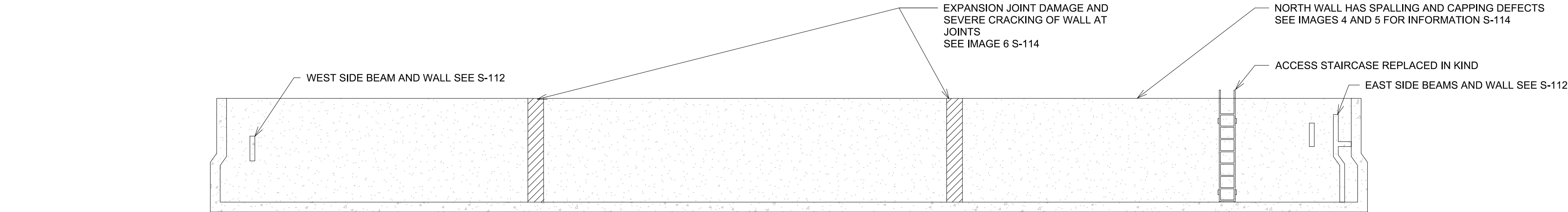
**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING

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55 SOUTH MAIN ST ONEONTA, NY 13820 - 607.432.8073
311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290
111 WEST MAIN STREET, ALBANY, NY 12202 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

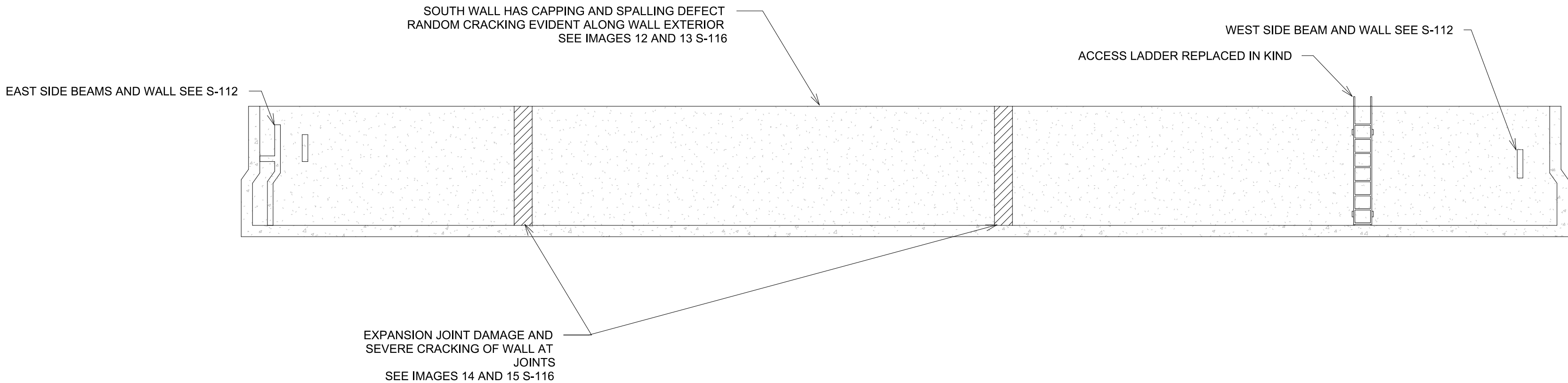
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SCALE:	AS SHOWN
REVIEWED BY:	AH
PROJECT NO.:	19-1843
FILE:	

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① NORTH WALL INTERIOR
1/8" = 1'-0"



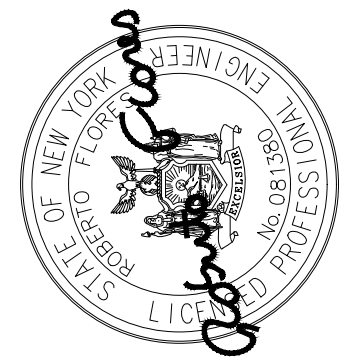
② SOUTH WALL INTERIOR
1/8" = 1'-0"

NOTE: CONTRACTOR TO ASSESS TANK AND
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CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
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REVISIONS		DESCRIPTION
NO.	DATE	

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

EXISTING
OVERFLOW TANK
STRUCTURAL
IMPROVEMENTS
NORTH / SOUTH

SHEET:
S-113

BID PLANS



IMAGE 1
NTS



IMAGE 2
NTS



IMAGE 3
NTS

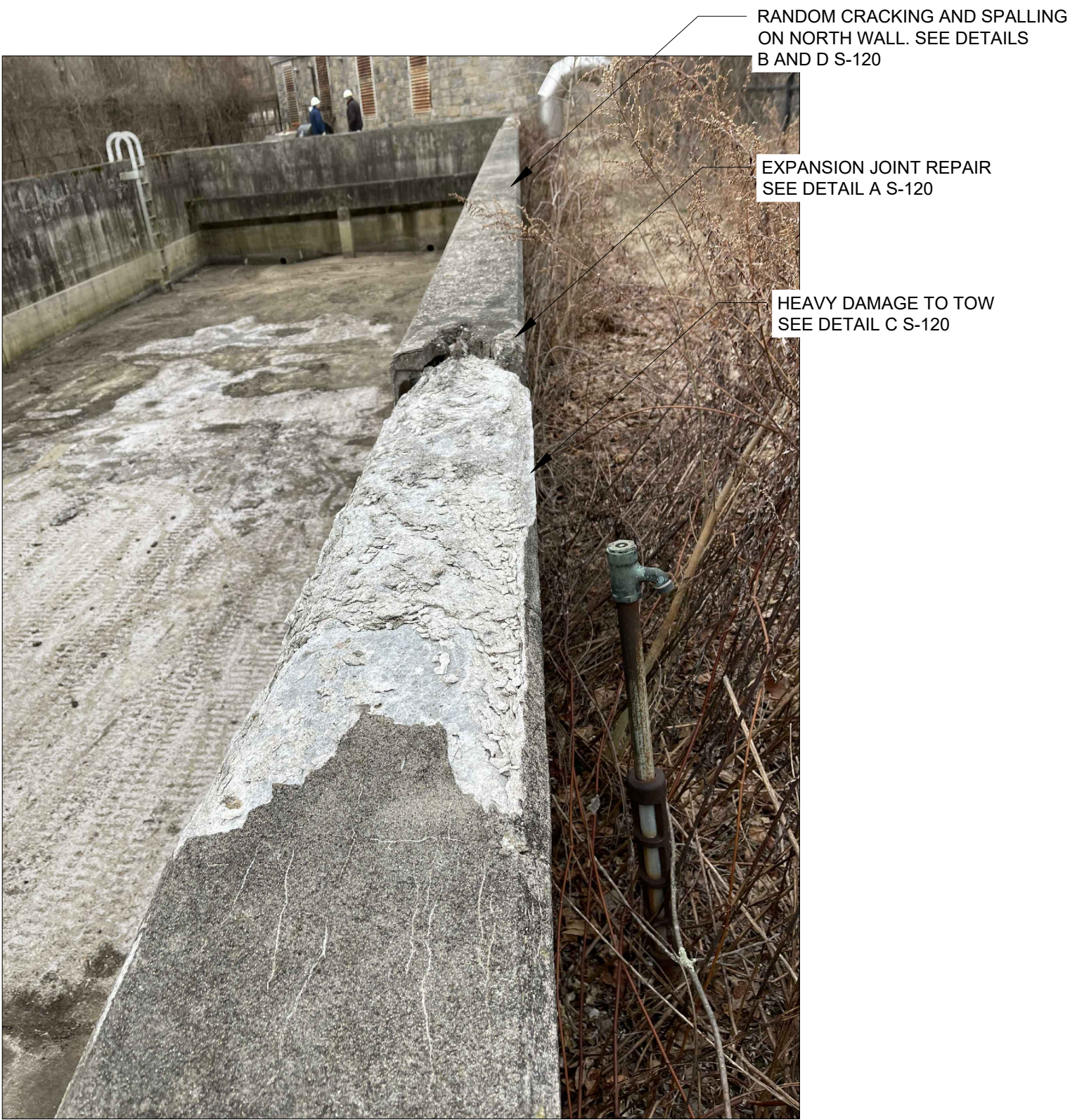


IMAGE 4
NTS

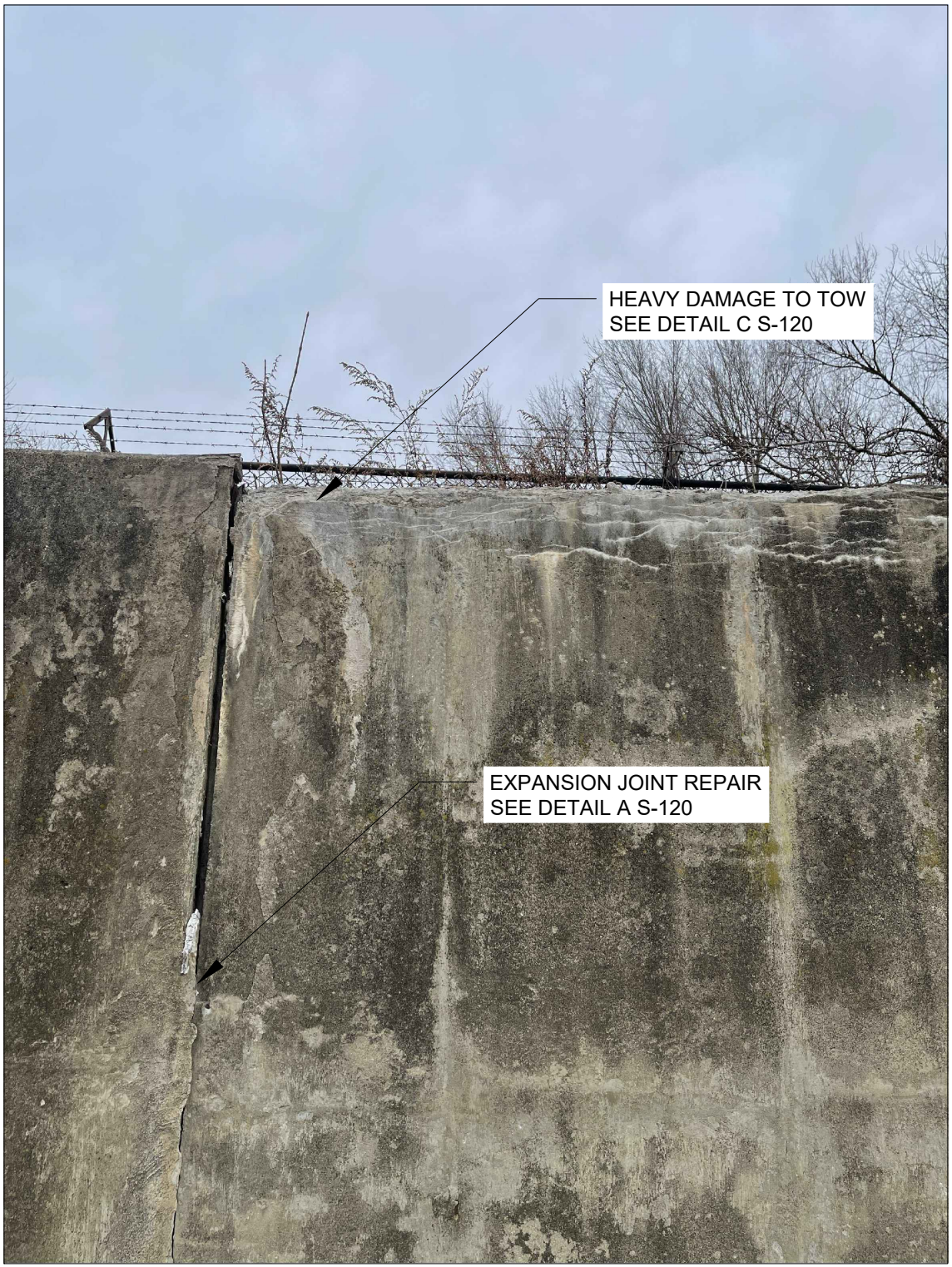


IMAGE 5
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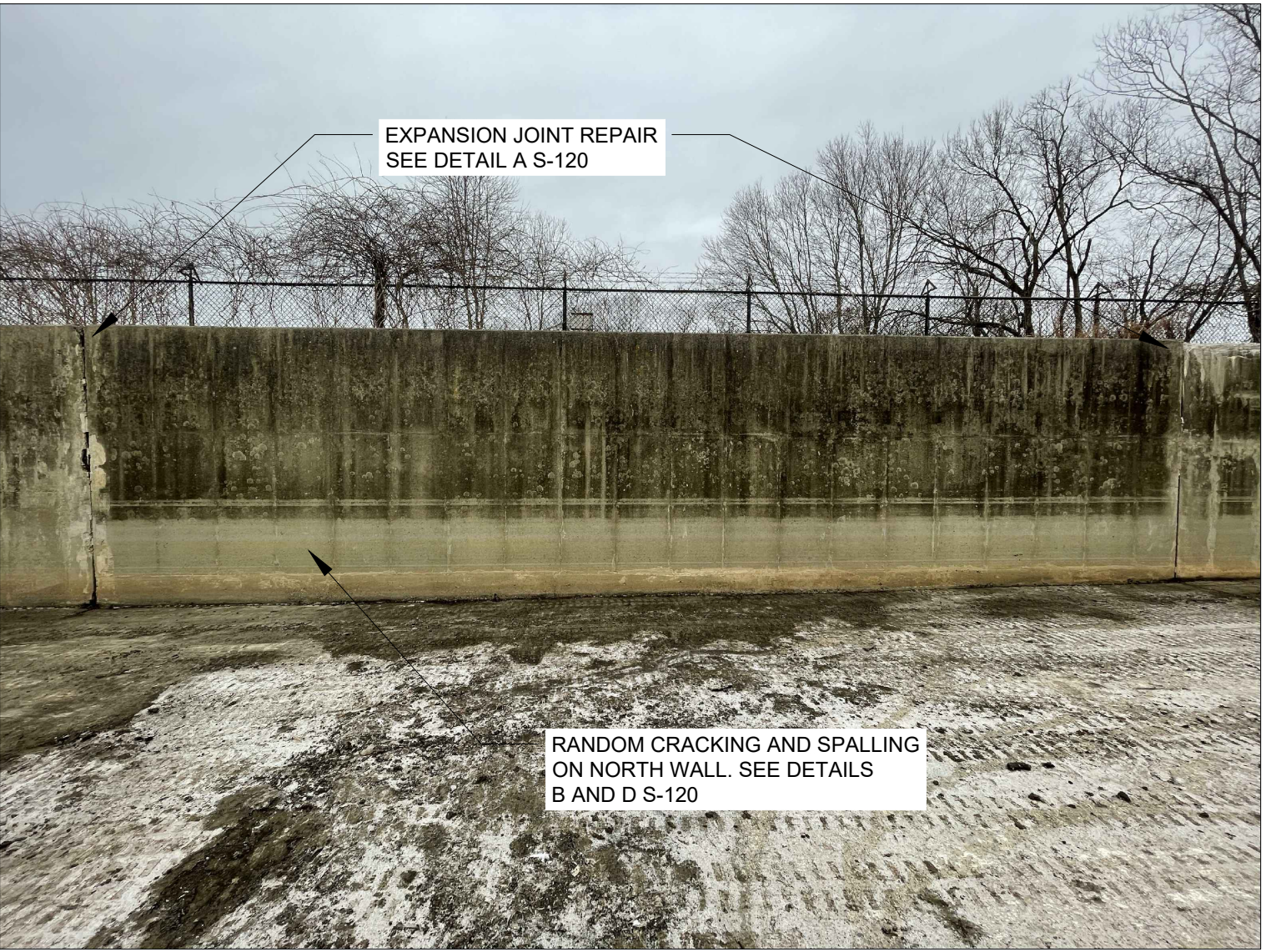
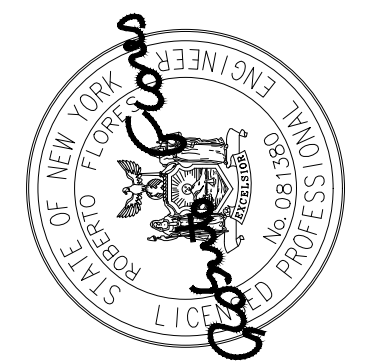


IMAGE 6
NTS

NOTE: IMAGES DO NOT PROVIDE AN EXHAUSTIVE DOCUMENTATION OF REPAIR ISSUES. CONTRACTOR TO ASSESS TANK AND VERIFY ALL REPAIR LOCATIONS

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CIVIL AND ENVIRONMENTAL ENGINEERING
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REVISIONS		DESCRIPTION
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SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

EXISTING
OVERFLOW TANK
STRUCTURAL
IMAGES

SHEET:
S-114

FILE: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SNPS_OVERFLOW_TANK_STRUCTURAL.DWG Saved: 1/21/2022 10:48:02 AM Plotted: 1/21/2022 3:51:09 PM User: Kyle Muller LastSavedBy: mulent



IMAGE 7
NTS



IMAGE 8
NTS



IMAGE 9
NTS

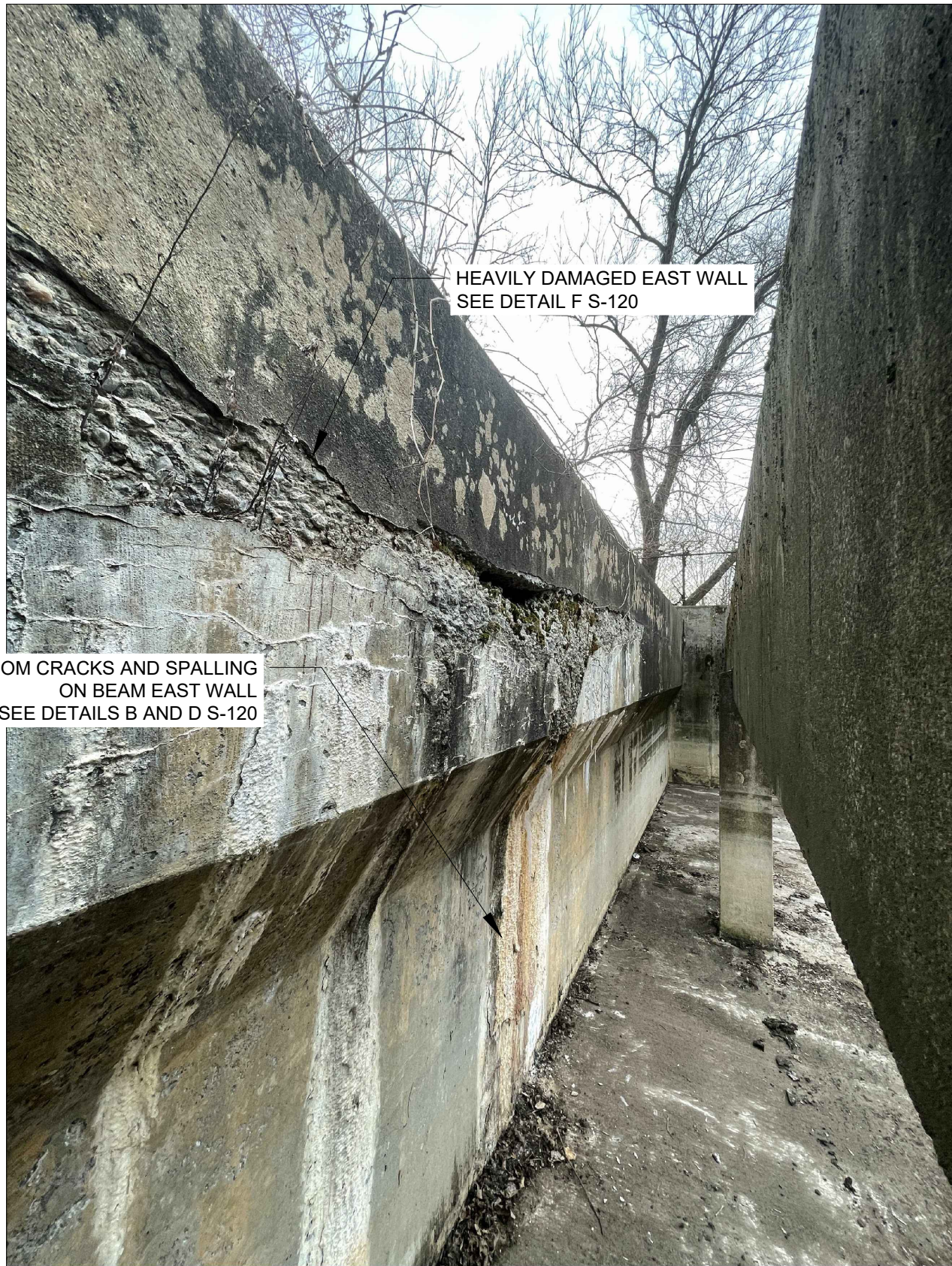


IMAGE 10
NTS



IMAGE 11
NTS

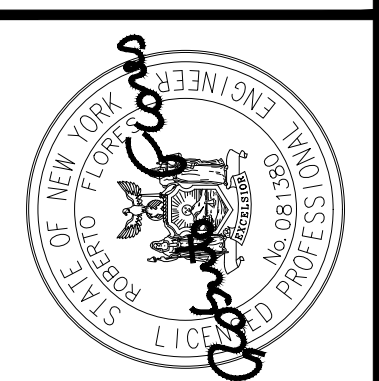
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BID PLANS

DATE:	06/21
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**DELAWARE
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REVISIONS		DESCRIPTION
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SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

EXISTING
OVERFLOW TANK
STRUCTURAL
IMAGES

SHEET:
S-115

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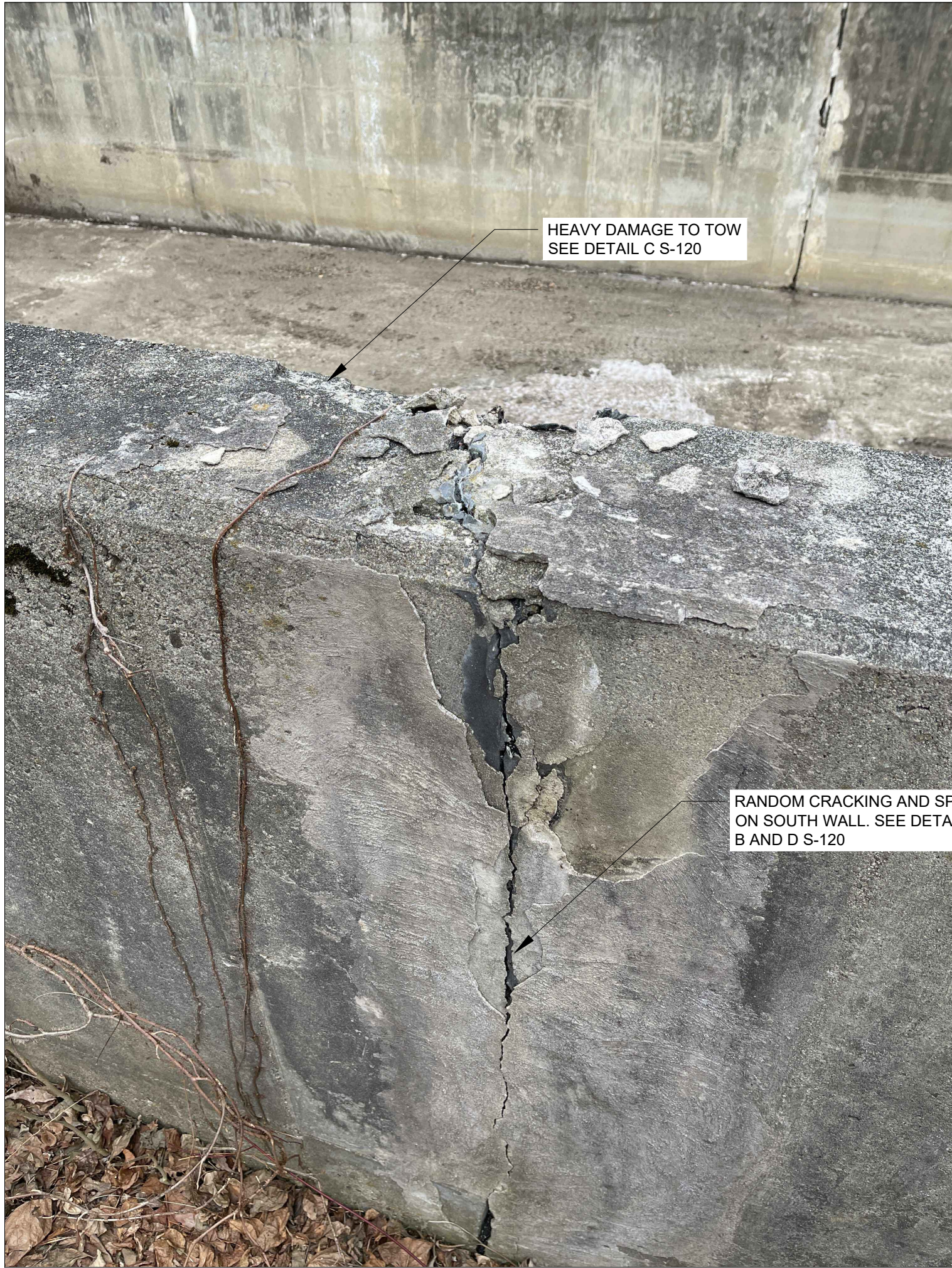


IMAGE 12
NTS



IMAGE 13
NTS



IMAGE 14
NTS



IMAGE 15
NTS

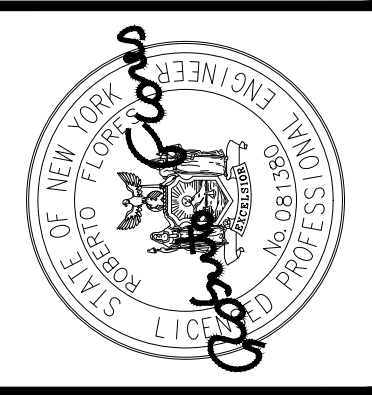
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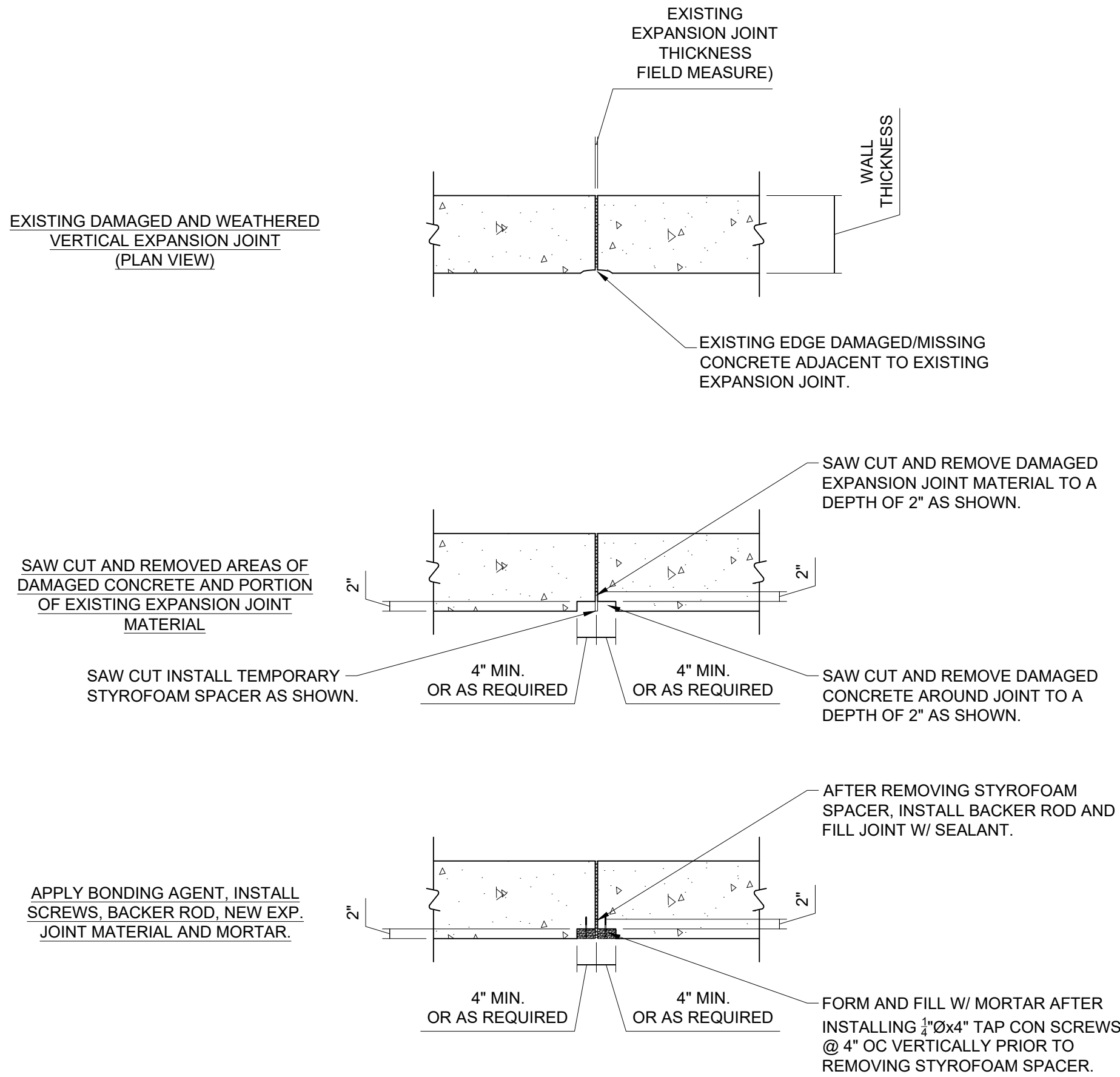
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

EXISTING
OVERFLOW TANK
STRUCTURAL
IMAGES

SHEET:
S-116

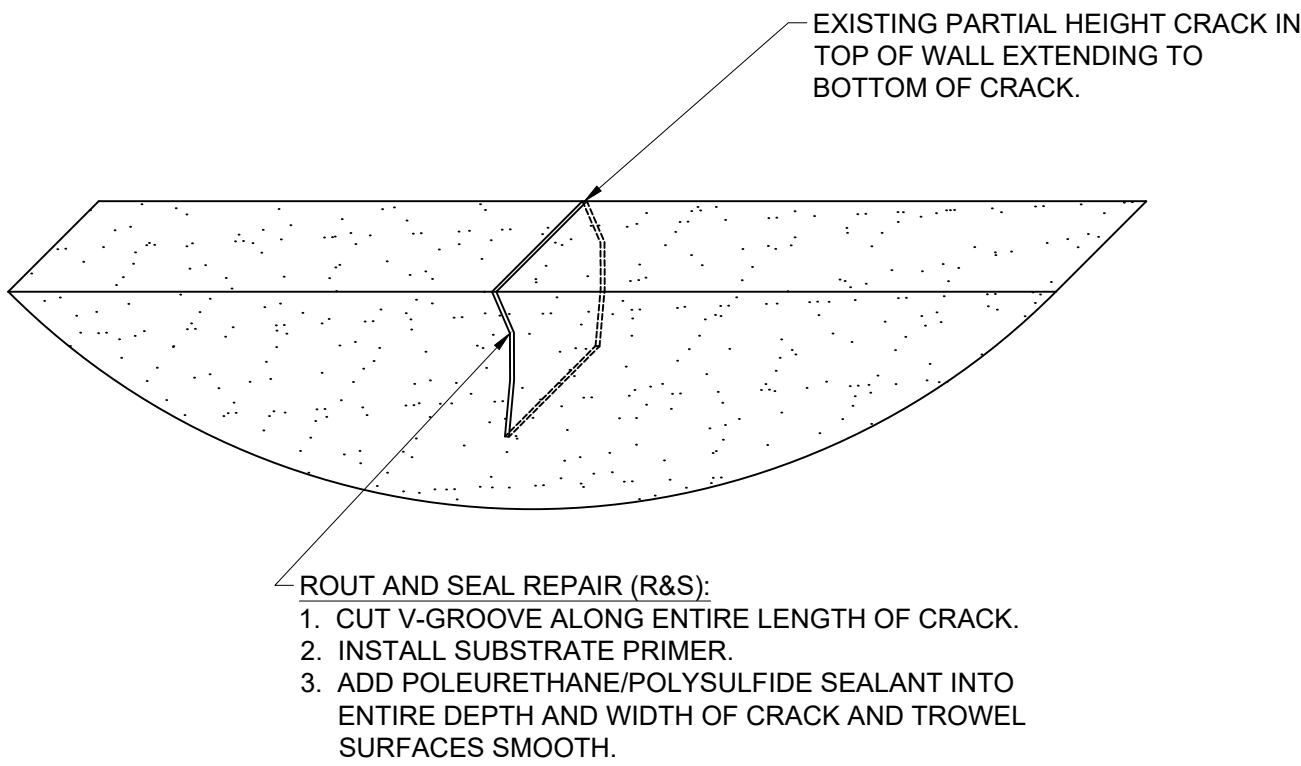
BID PLANS

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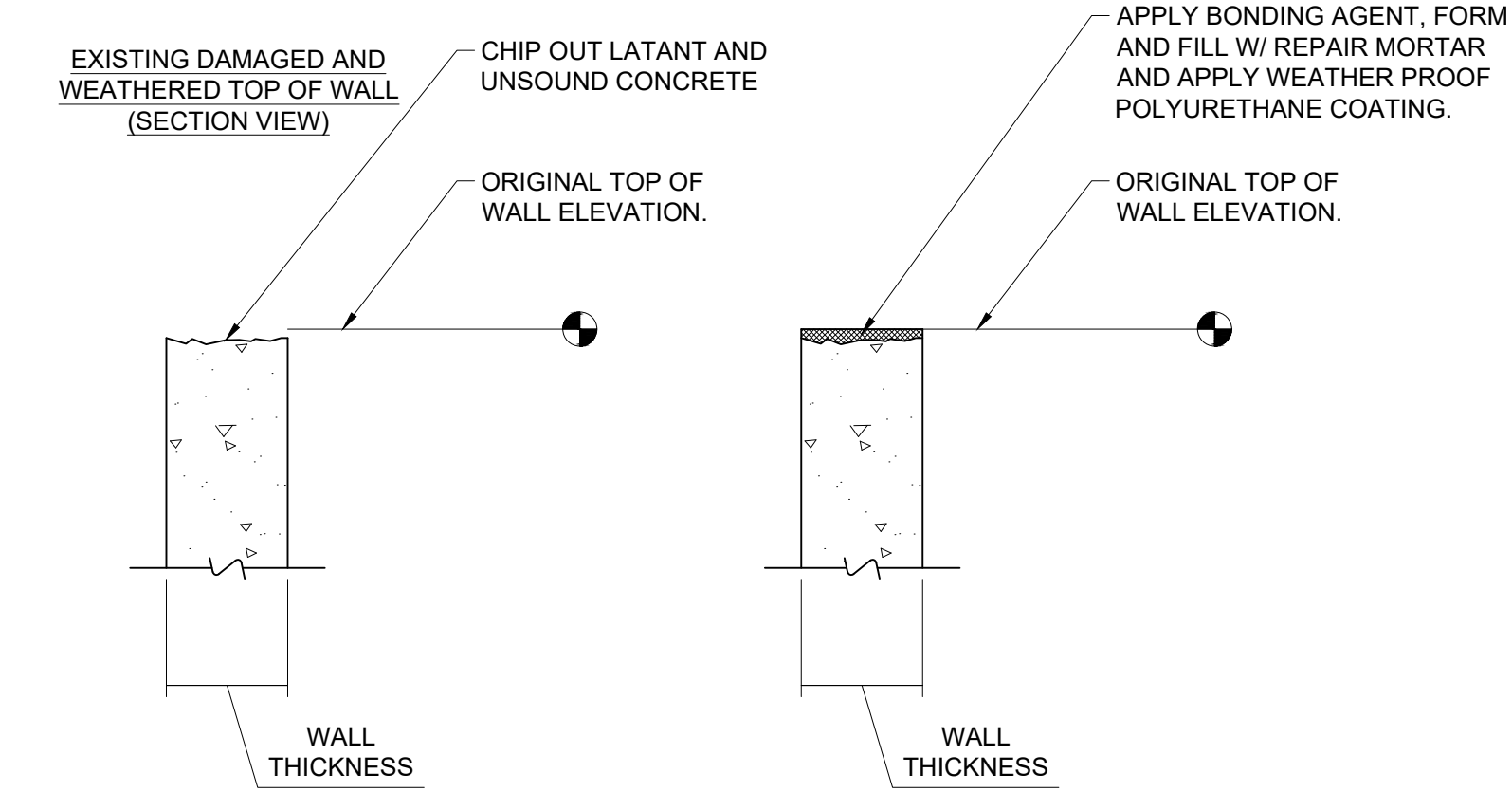
RANDOM EXP. JOINT REPAIR
SCALE: NONE

A
S120



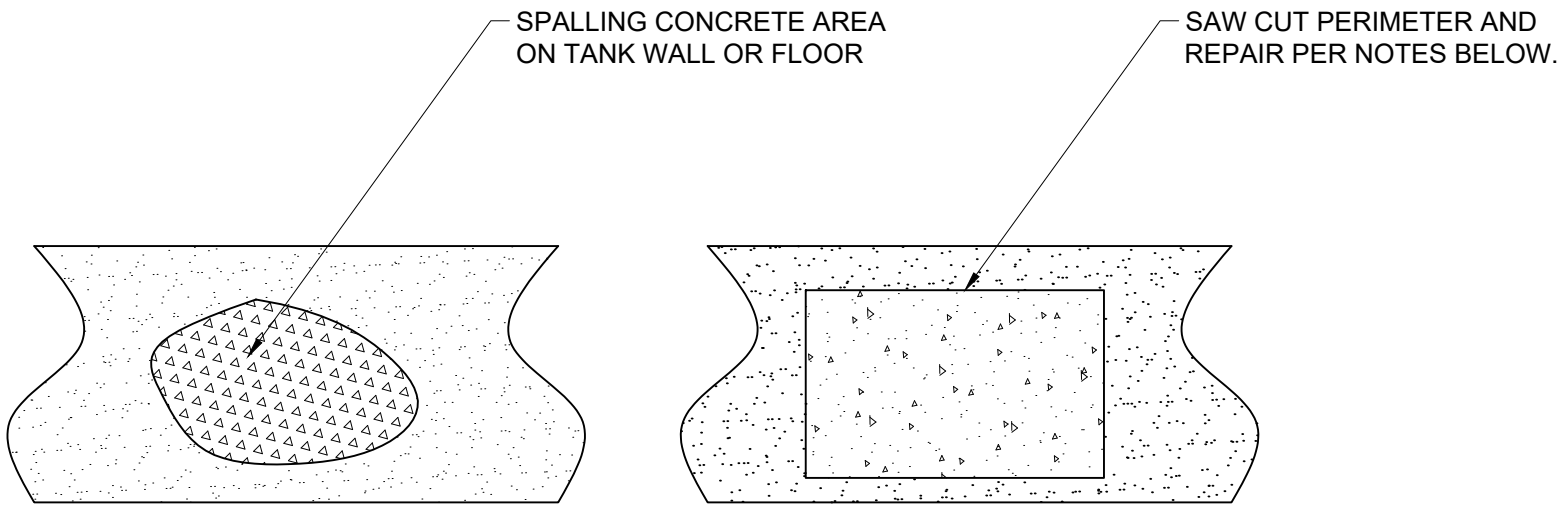
RANDOM WALL CRACK REPAIR
SCALE: NONE

B
S120



WALL CAPPING DETAIL
SCALE: NONE

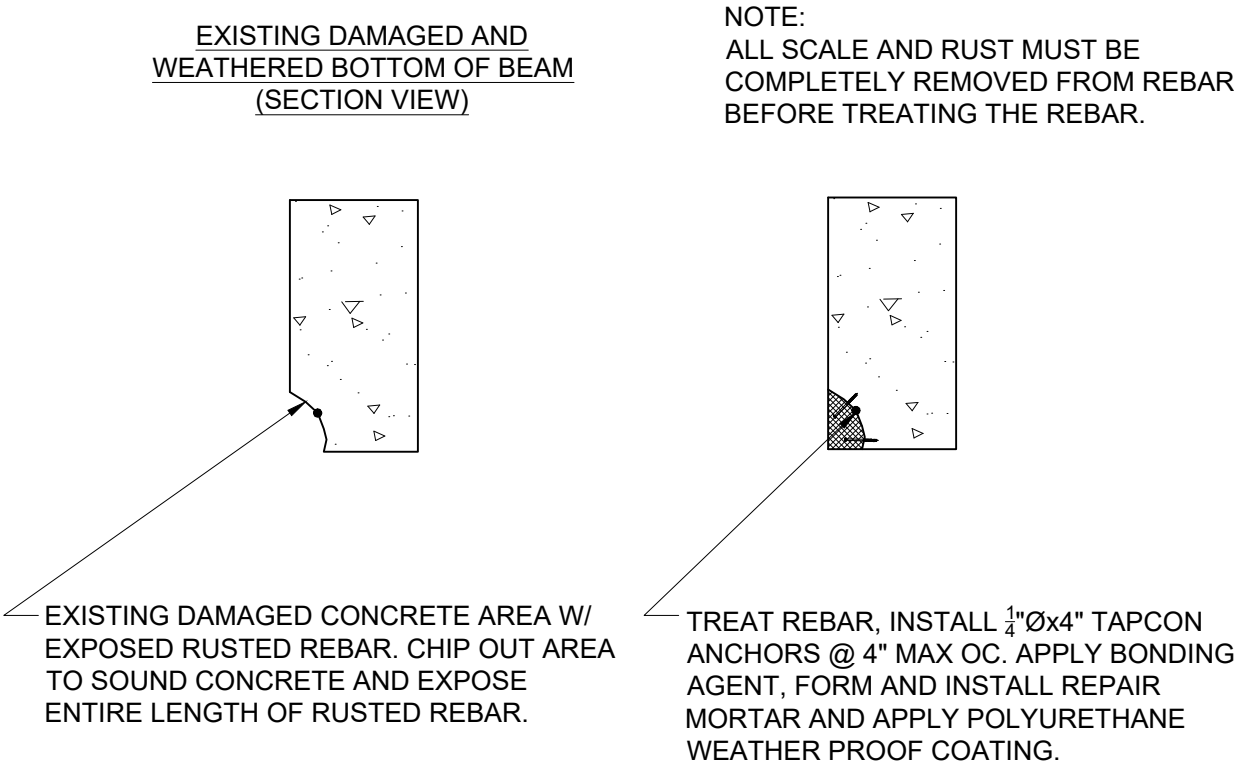
C
S120



- SAW CUT PERIMETER OF REPAIR AT LEAST 1/4" DEEP.
- CHIP OUT ALL UNSOUND CONCRETE WITHIN SAW CUT PERIMETER.
- INSTALL REPAIR MORTAR PER MANUFACTURER'S RECOMMENDATIONS (OR CONCRETE FILL FOR LARGER AREAS SUCH AS TANK FLOORS).
- USE MECHANICAL ATTACHMENT (DOWELING OR OTHER ANCHORS) FOR REPAIR DEPTHS>2".

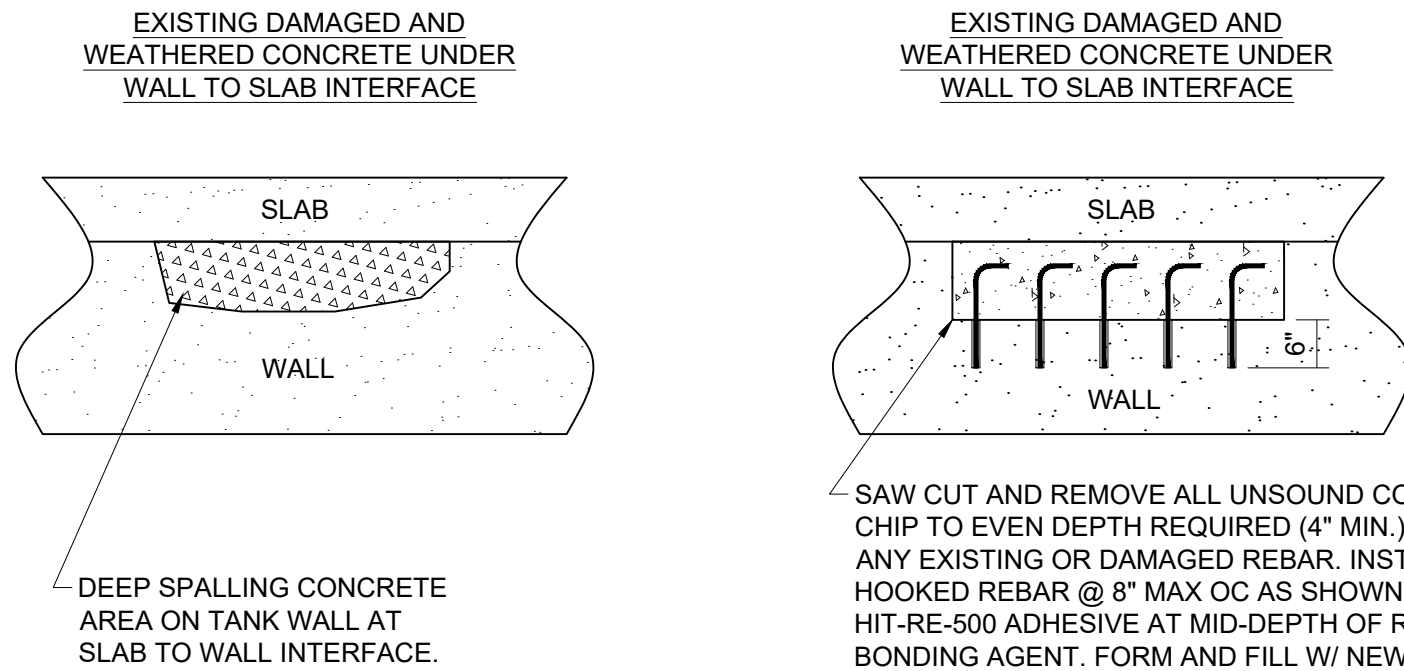
CONCRETE SPALL REPAIR
SCALE: NONE

D
S120



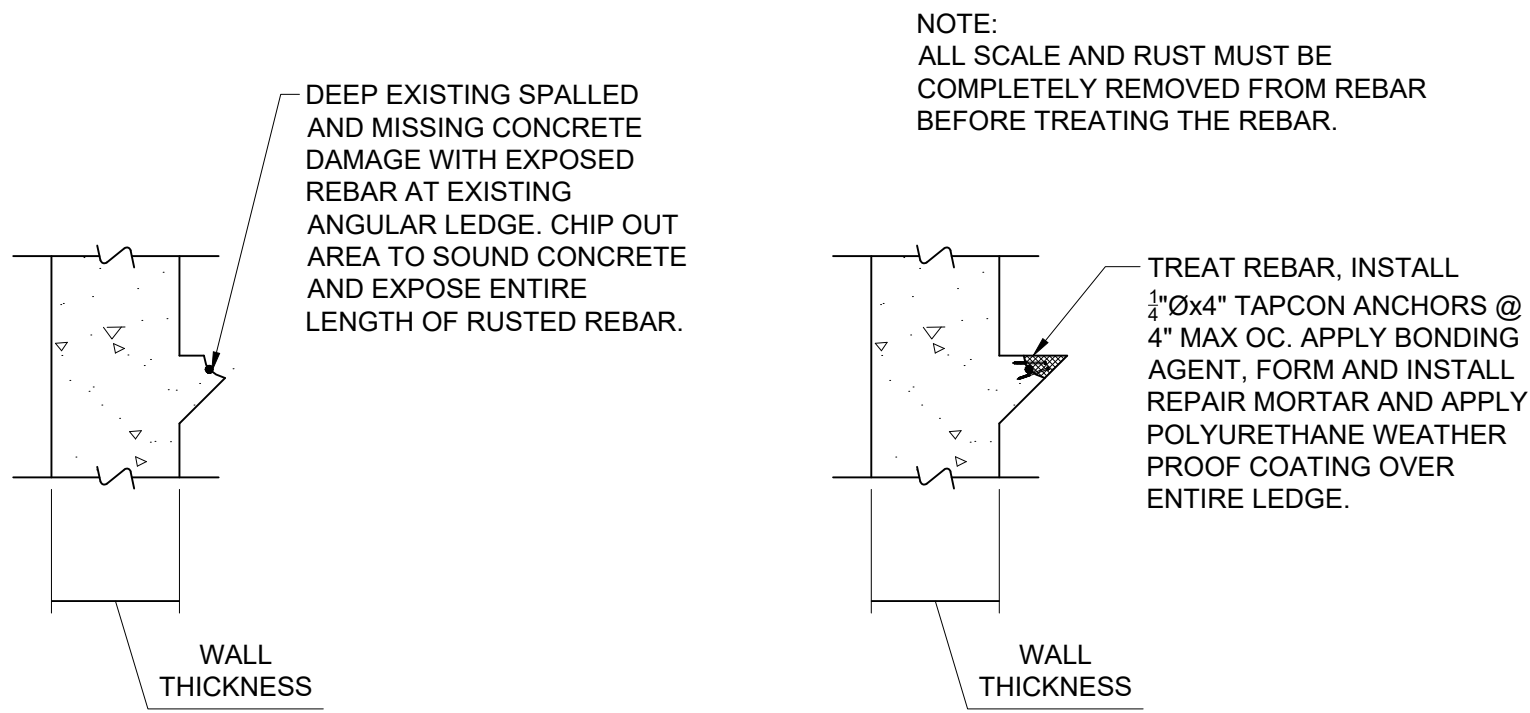
DAMAGED BEAM REPAIR
SCALE: NONE

E
S120



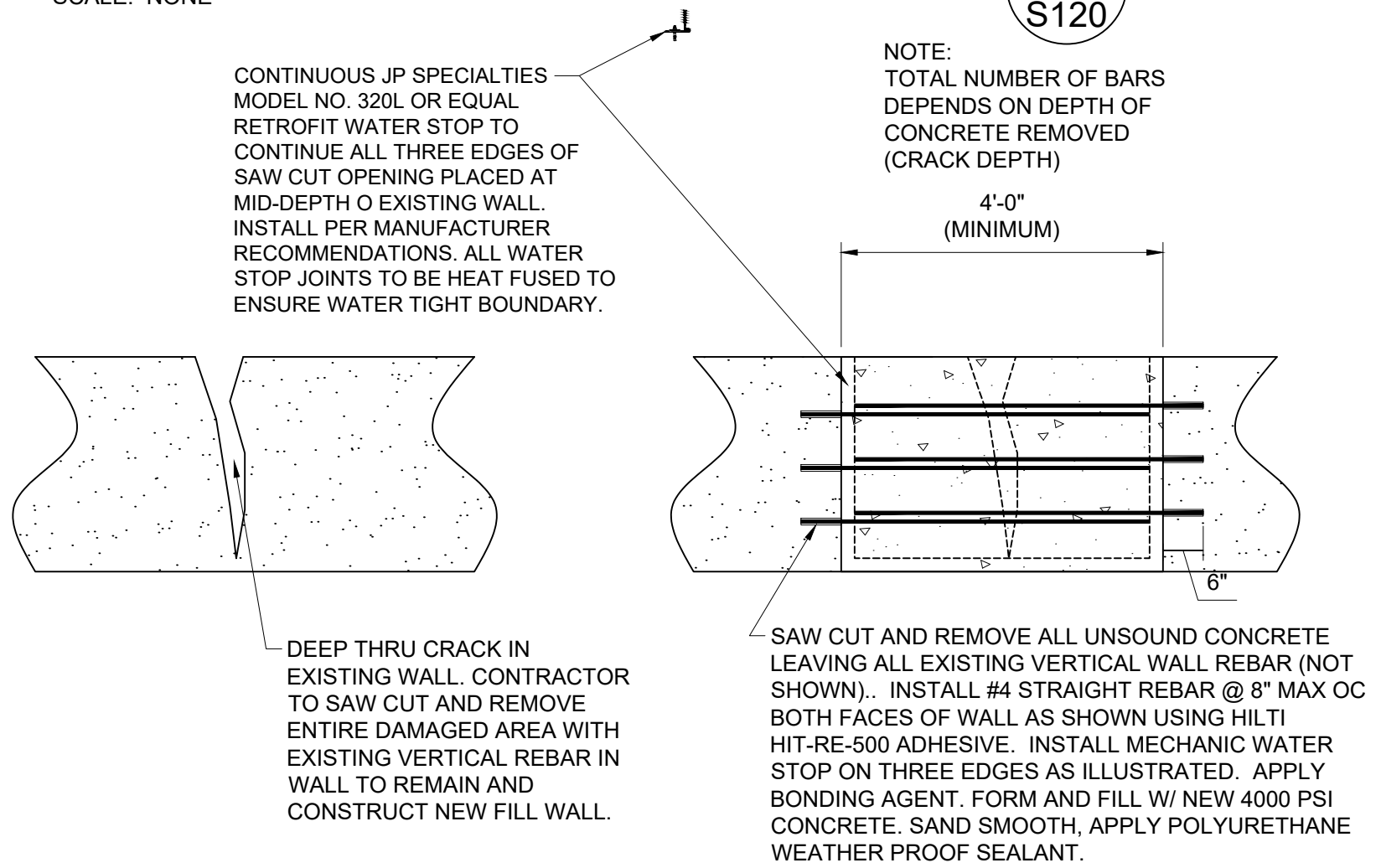
HEAVILY DAMAGED WALL AREA REPAIR
SCALE: NONE

F
S120



DAMAGED ANGULAR LEDGE REPAIR
SCALE: NONE

G
S120



SEVERE WALL CRACK REPAIR
SCALE: NONE

H
S120

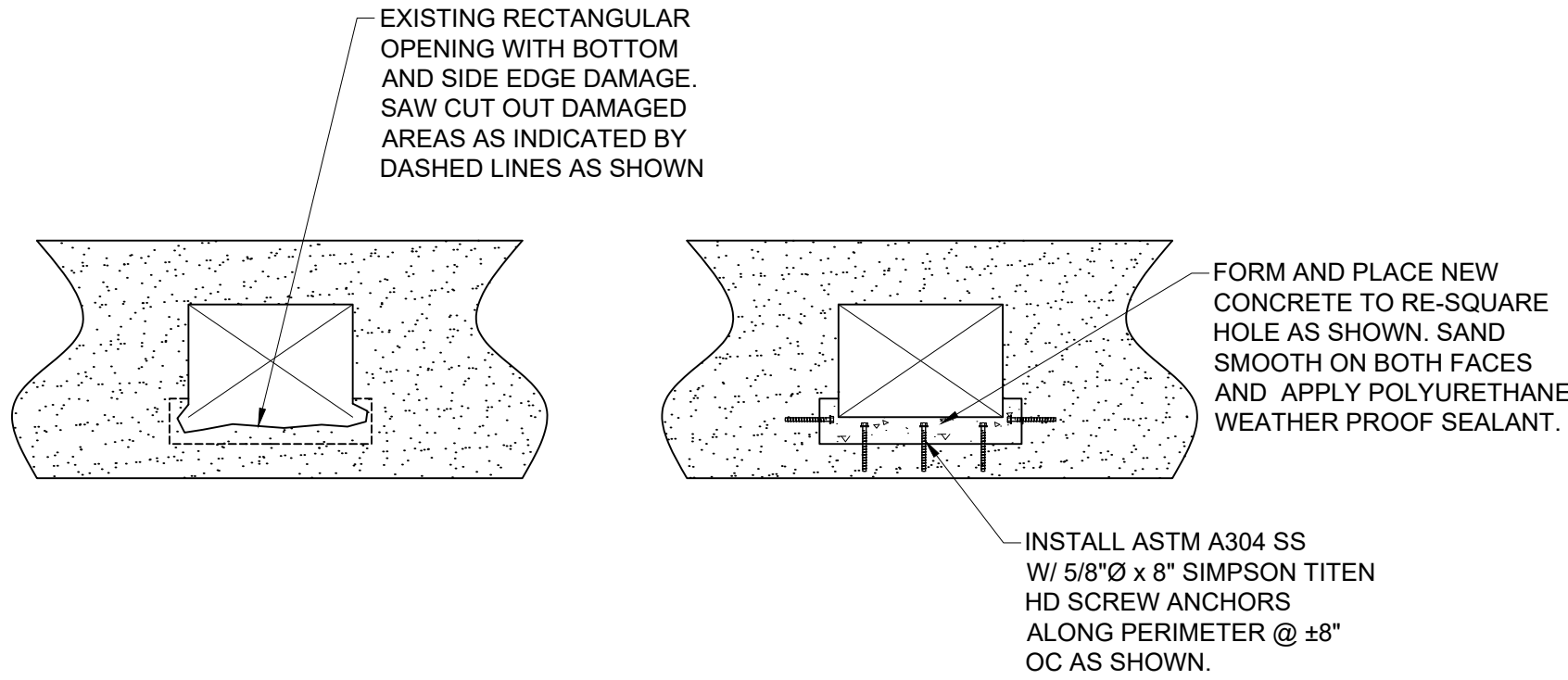
NOTE:
CONTRACTOR TO SUBMIT ON ALL PRODUCTS TO BE USED FOR REPAIRING TANK CRACKS, SURFACES AND OTHER DAMAGED AREAS. APPROVED MANUFACTURERS ARE SIKA AND EUCLID.

BID PLANS

DELaware ENGINEERING, D.P.C. CIVIL AND ENVIRONMENTAL ENGINEERING 28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290 55 SOUTH MAIN ST. ONEONTA, NY 13920 - 607.432.8073 311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290 16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290 548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777	DATE: 01/22	DRAWN BY: YB	SCALE: AS SHOWN	REVIEWED BY:	PROJECT NO.: 19-1843	FILE:																		
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	NO.	DATE	DESCRIPTION																					
SAW MILL PUMP STATION UPGRADES VILLAGE OF MOUNT KISCO WESTCHESTER COUNTY, NY																								
HOLDING TANK REPAIR DETAILS																								
SHEET: S120																								

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File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\PUMP STATION C DRAWINGS\STRUCTURAL-YEL.DWG Saved: 11/2/2021 2:56:02 PM Plotted: 1/21/2022 3:53:25 PM User: Kyle Muller LastSavedBy: mullek



CONCRETE OPENING REPAIR

SCALE: NONE

I
S121

APPROVED EUCLID OR EQUAL PRODUCT SPECIFIC REPAIR METHODOLOGY:

RANDOM JOINT REPAIR - (DETAIL A/S120)
REMOVE ALL LOOSE, LATANT CONCRETE, GETTING DOWN TO LOOSE CONCRETE.
APPLY TEMPORARY SPACER.
APPLY BONDING AGENT **DURALPREP AC** TO SOUND CONCRETE.
FORM AREAS FOR NEW CONCRETE.
SMALLER AREAS CAN BE REPLACED WITH **EUCOREPAIR V100**.
IF LARGER AREAS LET'S SAY 4 INCHES OR MORE APPLY REPAIR MORTAR **EUCOREPAIR SCC OR EUCOCRETE SUPREME** VIA FORM AND POUR APPLICATION.
REMOVE TEMPORARY SPACER.
APPLY SEALANT PRIMER - **EUCOLASTIC PRIMER**
APPLY BACKER ROD
APPLY POLYURETHANE **EUCOLASTIC 1NS**

RANDOM WALL CRACK - (DETAIL B/S120)
APPLY **TAMMSFLEX PRIMER** OR **EUCOLASTIC PRIMER**
APPLY **TAMMSFLEX NS OR EUCOLASTIC 1NS**

WALL CAPPING DETAIL - (DETAIL C/S120)
DEMO EXISTING CONCRETE TO SOUND CONCRETE
APPLY BONDING AGENT **EUCOWELD 2.0**. TO TOP SURFACE
APPLY **VERSASPEED 100 OR VERSASPEED LS 100**
APPLY **TAMOSEAL WITH AKKRO 7T**
PROVIDE ROUNDED OR BEVELED WALL CAP TO PROVIDE WATER RUN-OFF

CONCRETE SPALL REPAIR - (DETAIL D/S120)
DEMO EXISTING CONCRETE TO SOUND CONCRETE
APPLY BONDING AGENT **EUCOWELD 2.0**
FILL WITH **EUCOCRETE SUPREME**.

DAMAGED BEAM REPAIR - (DETAIL E/S120)
DEMO EXISTING CONCRETE TO SOUND CONCRETE WHILE CLEANING THE REBAR
COAT THE EXISTING REBAR WITH **DURALPREP AC**
COAT THE AREAS OF SOUND CONCRETE WITH **DURALPREP AC**.
2 OPTIONS
SMALLER REPAIR GO WITH EUCOREPAIR V100
FOR FORM AND POUR, USE FORM AND POUR **EUCOREPAIR SCC OR EUCOCRETE SUPREME**
COVER WITH **TAMMOSHIELD**.

HEAVILY DAMAGED WALL AREA REPAIR - (DETAIL F/S120)
DEMO EXISTING CONCRETE TO SOUND CONCRETE & INSTALLING NEW #4'S REBARS,
APPLY BONDING AGENT **DURALPREP AC**.
CONCRETE TO BE 4000 PSI WITH 0.45 W/CM
APPLY CURING AND SEALING MATERIAL **AQUA CURE VOX OR DIAMOND CLEAR VOX**
APPLY **TAMOSEAL WITH AKKRO 7T**.

DAMAGED ANGULAR LEDGE REPAIR - (DETAIL G/S120)
DEMO EXISTING CONCRETE TO SOUND CONCRETE.
APPLY BONDING AGENT **DURALPREP AC**
APPLY **EUCOCRETE SUPREME**

SEVERE WALL CRACK REPAIRS - (DETAIL H/S120)
APPLY BONDING AGENT **DURALPREP AC**
APPLY NEW CONCRETE 4000 PSI WITH 0.45 W/CM
APPLY **TAMOSEAL WITH AKKRO 7T**.

CONCRETE OPENING REPAIR - (DETAIL I/S121)
FORM AND REPLACE WITH NEW CONCRETE.

NOTE: FOR ALL REPAIRS THAT REQUIRE THE DEMOLITION OF EXISTING CONCRETE TO SOUND CONCRETE, ENGINEER OF RECORD SHALL BE ALLOWED TO INSPECT THE DEMOLITION PRIOR TO EXECUTING THE LISTED REPAIR.

BID PLANS

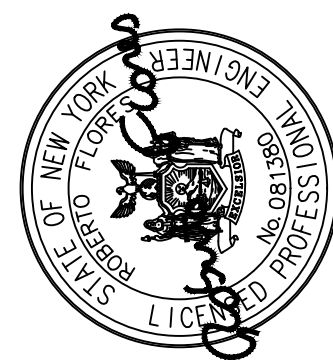
HOLDING TANK
REPAIR DETAILS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SHEET:

S121

REVISIONS		DESCRIPTION
NO.	DATE	



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ENGINEERING, D.P.C.**
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16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
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SCALE: AS SHOWN
REVIEWED BY: _____
PROJECT NO.: 19-1843
FILE: _____

WARNING - IT IS A VIOLATION OF NEW YORK EDUCATION LAW SECTION 7209.2, FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATION LAW, SECTION 7209.2.

- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, INSTALLING AND CONNECTING ALL LINE AND LOW VOLTAGE CONDUIT, CONDUCTORS, SWITCHES, DISCONNECTS, JUNCTION BOXES, AND FIXTURES FOR POWER, TELECOMMUNICATIONS, AND LIGHTING SYSTEMS.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE SUPPLYING, INSTALLING AND CONNECTING ALL LINE AND LOW VOLTAGE CONDUIT AND CONDUCTORS FOR ALL EQUIPMENT SUPPLIED BY THE GENERAL CONTRACTOR.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL LINE AND LOW VOLTAGE CONDUIT AND CONDUCTORS FOR EQUIPMENT SUPPLIED BY THE HVAC CONTRACTOR.
4. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL LINE AND LOW VOLTAGE TEMPERATURE CONTROL DEVICES. TEMPERATURE CONTROL DEVICES SHALL BE EXPLOSION PROOF WHEN LOCATED IN A CLASSIFIED SPACE.
5. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT AND FIBER CABLE.
6. THE ELECTRICAL CONTRACTOR SHALL SUPPLY, RIG AND MOUNT THE ELECTRICAL GENERATOR TRANSFER SWITCH AND ASSOCIATED COMPONENTS.
7. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL CONDUIT, CONDUCTORS, AND ASSOCIATED ITEMS TO CONNECT THE GENERATOR TO THE BUILDING ELECTRICAL SYSTEM.
8. THE ELECTRICAL CONTRACTOR SHALL PROVIDE GENERATOR START UP, TESTING, AND OWNER TRAINING PER THE CONSTRUCTION SPECIFICATIONS, AND SHALL ENSURE CORRECT FUNCTIONING OF THE INTERCONNECTION OF THE GENERATOR TO THE BUILDING ELECTRICAL SYSTEM.
9. THE ELECTRICAL CONTRACTOR SHALL FILL THE FUEL TANK BEFORE TESTING THE GENERATOR SET AND REFILL THE FUEL TANK AFTER THE LOAD TESTING IS COMPLETE.
10. LABEL ALL PANELS, DISCONNECTS, MOTOR STARTERS, AND CONTROLLERS. ALL LABELS ARE TO BE SELF ADHERING PLASTIC LAMINATED WITH 3/8" WHITE LETTERS ON A BLACK BACKGROUND. ALL DEVICES WILL BE IDENTIFIED BY THEIR NUMBER, VOLTAGE AND SOURCE OF POWER.
11. PROVIDE A TYPEWRITTEN CIRCUIT DIRECTORY IN ALL NEW PANEL BOXES.
12. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING AND SCHEDULING ALL ELECTRICAL INSPECTIONS, PAY ALL FEES, AND SUBMIT A FINAL INSPECTION REPORT TO THE ENGINEER.
13. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL METERING EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS OF THE POWER COMPANY.
14. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL GROUNDING IN ACCORDANCE WITH NEC ARTICLE 250 AND ACCORDING TO THE REQUIREMENTS INDICATED ON THE DRAWINGS. EQUIPMENT GROUNDING CONDUCTORS SHALL BE USED. GROUNDING THROUGH RACEWAY AND CONDUITS NOT PERMITTED.
15. THE LOCATIONS AND ROUTES OF CONDUITS AND RACEWAYS SHOWN ON THESE DRAWINGS ARE SCHEMATIC. ALL CONDUITS ABOVE THE SLAB SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING. CONDUITS ABOVE THE CEILING SHALL BE MOUNTED AS HIGH AS POSSIBLE. ALL BELOW GROUND CONDUITS SHALL BE INSTALLED USING THE MOST DIRECT ROUTE WITH CONSIDERATION OF PROPER COORDINATION WITH OTHER UTILITIES - UNDERGROUND OR ABOVE GROUND.
16. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND CONDUCTORS FOR TELEPHONE AND LAN SYSTEMS. ALL CONDUCTORS SHALL BE COPPER WITH TYPE THHN/THWN OR XHHW INSULATION UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE SIZED PER NEC.
17. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LAMPS FOR ALL LIGHTING FIXTURES.
18. ALL DUPLEX RECEPTACLES SHALL BE MOUNTED VERTICALLY AND 18" NOMINALLY AFF TO BOTTOM OF BOX UNLESS OTHERWISE INDICATED.
19. ALL LED LIGHTS SHALL BE WARRANTED BY THE MANUFACTURER FOR 5 YEARS. ALL LED LIGHTS THAT FAIL WITHIN THE FIRST YEAR OF SUBSTANTIAL COMPLETION SHALL BE REPLACED BY THE ELECTRICAL CONTRACTOR AT NO COST TO THE OWNER. PROVIDE WRITTEN WARRANTY TO THE OWNER.
20. FASTENING OF HANGERS TO THE ROOF WILL NOT BE PERMITTED. ANY CONTRACTOR RESPONSIBLE FOR PUNCTURING THE ROOF STRUCTURE WILL REPAIR THE ROOF AT THEIR EXPENSE.
21. ALL DISCONNECT SWITCHES AND SAFETY SWITCHES ARE TO BE HEAVY DUTY TYPE.
22. MC CABLE WILL NOT BE ACCEPTED.
23. "GREENFIELD" AND LIQUID TIGHT FLEX CONDUIT MAY BE USED IN LENGTHS NOT TO EXCEED 72".
24. THE ELECTRICAL CONTRACTOR SHALL CAULK ALL PENETRATIONS,RELATED TO ELECTRICAL WORK, IN 1 & 2 RATED HR FIRE WALL WITH 3M FIRE CAULK. SEAL LARGER OPENINGS WITH WIREMOLD "FLAMESTOPPER" KIT.
25. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, AND CONDUCTORS REQUIRED TO PROVIDE A COMPLETE AND OPERATING PUMP STATION CONTROL SYSTEM. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUMP STATION CONTROL PANEL FINAL TERMINATIONS AND LANDINGS.
26. THE GENERAL CONTRACTOR (PUMP STATION CONTROL PANEL VENDOR) SHALL PROVIDE AND INSTALL ALL PUMP STATION CONTROL DEVICES REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL PUMP STATION CONTROL SYSTEM.
27. ALL INSTRUMENTATION SHALL BE POWERED FROM THE PUMP STATION CONTROL PANELS UNLESS OTHERWISE NOTED ON DRAWINGS.
28. ALL FASTENERS, HANGERS, AND STRUT IN THE WETWELLS SHALL BE STAINLESS STEEL.
29. ALL CONDUIT IN THE WETWELLS SHALL BE PVC COATED GALVANIZED.
30. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL LIGHTING, DISCONNECTS, CONDUIT, ETC., SO THEY DO NOT INTERFERE WITH THE MECHANICAL EQUIPMENT.

	NEW #4/0 AWG MAIN GROUND GRID CONDUCTOR BELOW GRADE (BURY 30" BELOW GRADE THROUGHOUT)		GROUND GRID RISER CONDUCTOR THROUGH SLAB FOR CONNECTION TO COLUMN, EQUIPMENT, ETC.		EXOTHERMIC CONNECTION BETWEEN GROUND GRID CONDUCTOR		NEW PANEL		HOMERUN GP = GENERAL PURPOSE PANEL 'GP' 2 = CIRCUIT NO.		CONDUIT DOWN		CONDUIT UP		FLEXIBLE CONDUIT CONNECTION		SPECIAL USE RECEPTACLE REFER TO INFORMATION ON INDIVIDUAL DRAWINGS		NEW RECEPTACLE GF = GROUND FAULT WP = WEATHERPROOF LPA1-2 = FEED FROM PANEL LPA1 CIRCUIT 2		EXISTING SINGLE RECEPTACLE 42" AFF = 42 INCHES ABOVE FINISHED FLOOR		SWITCH - A = SWITCHING SCHEME 3 = 3 WAY 4 = 4 WAY M = MOTOR STARTER TYPE		NEW TELEPHONE JACK		STROBE LIGHT		PULL STATION WITH KEY RESET		SMOKE DETECTOR PHOTO ELECTRIC		HEAT DETECTOR X=135 FOR 135DEG RATE OF RISE AND X=190 FOR 190DEG RATE OF RISE		SUPPRESSION SYSTEM SUPERVISION		DOOR HOLDER WALL MOUNT		ADDRESSABLE MINI MODULE		EXPLOSION PROOF SMOKE DETECTOR		EXPLOSION PROOF PULL STATION WITH KEY RESET		EXTERIOR STROBE LIGHT WITH HORN		ANNUNCIATOR		VAPORTITE LED LIGHT. 4' WIDE LENSED 4000 LUMEN FIXTURE WITH 3500K COLOR TEMP. COOPER MODEL#4VT2-LD4-6-DR-UNV-L840-CD1 OR APPROVED EQUAL.		120 VOLT CLASS 1 DIV 1 LED FIXTURE WITH GLOBE RIG-A-LITE SXPJ MODEL# SXPJ X-L2-U-G-Y X=06 FOR 50 WATT FIXTURE X=09 FOR 70 WATT FIXTURE X=11 FOR 96 WATT FIXTURE Y=C FOR CEILING MOUNT FIXTURE Y=W1 FOR WALL MOUNT FIXTURE		120 VOLT 32 W LED WALL PACK FIXTURE P = DUSK TO DAWN PHOTO CELL CONTROL HUBBELL MODEL#PGM3-180L3K-035-1-DB-PC		120 VOLT POLYCARBONATE EMERGENCY/EXIT CLASS 1, DIV1 FIXTURE WITH LED LIGHT AND BATTERY BACKUP. RIG-A-LITE XPEX SERIES MODEL # XPEX-2-R-DT-WP-EM OR APPROVED EQUAL WHITE CASE WITH RED LETTERS		120 VOLT POLYCARBONATE EMERGENCY/EXIT FIXTURE WITH LED LIGHT AND BATTERY BACKUP. OR APPROVED EQUAL WHITE CASE WITH RED LETTERS
	NORMALLY OPEN CONTACT		NORMALLY CLOSED CONTACT		DISCONNECT SWITCH		DISCONNECT SWITCH		MOTOR, SIZE AS INDICATED ON DRAWINGS. X = HORSEPOWER		KEY INTERLOCK		JUNCTION BOX. SIZE AS SHOWN ON DRAWINGS.		FUSE 80E = RATING		GENERATOR SIZE AS INDICATED ON DRAWINGS		LIGHTING FIXTURE CONTROLLED BY SWITCHING SCHEME A AND FED FROM LIGHTING PANEL LPM CIRCUIT 9.		VARIABLE FREQUENCY DRIVE WITH BYPASS		EMERGENCY STOP		LOCAL FORWARD/JOG REVERSE/ESTOP STATION		START/ESTOP STATION		VIDEO CAMERA		DOOR CONTACTOR		SECURITY ALARM KEYPAD		LIGHTING TRANSFORMER		DRAW OUT TYPE CIRCUIT BREAKER		DRAW-OUT TYPE POWER CIRCUIT BREAKER		DELTA-WYE TRANSFORMER. SIZE AS INDICATED ON DRAWINGS.		POTENTIAL TRANSFORMER		CURRENT TRANSFORMER		FLOAT		METHANE SENSOR		OXYGEN SENSOR		FLOAT				

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E-001

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

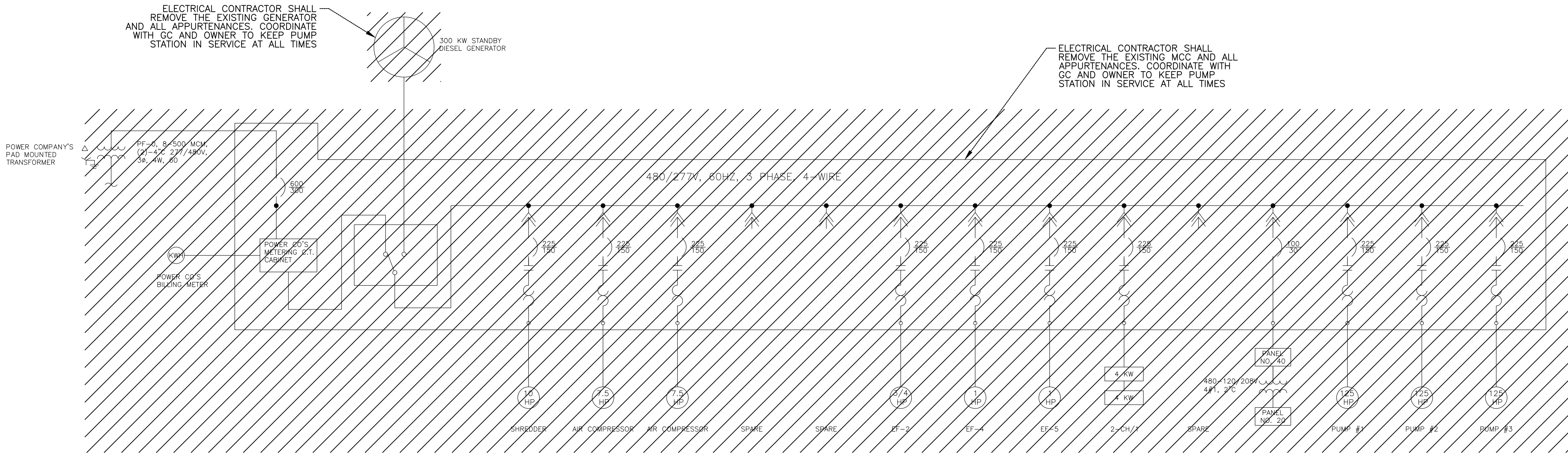
REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS
2	12/8/21	ADDENDUM #1



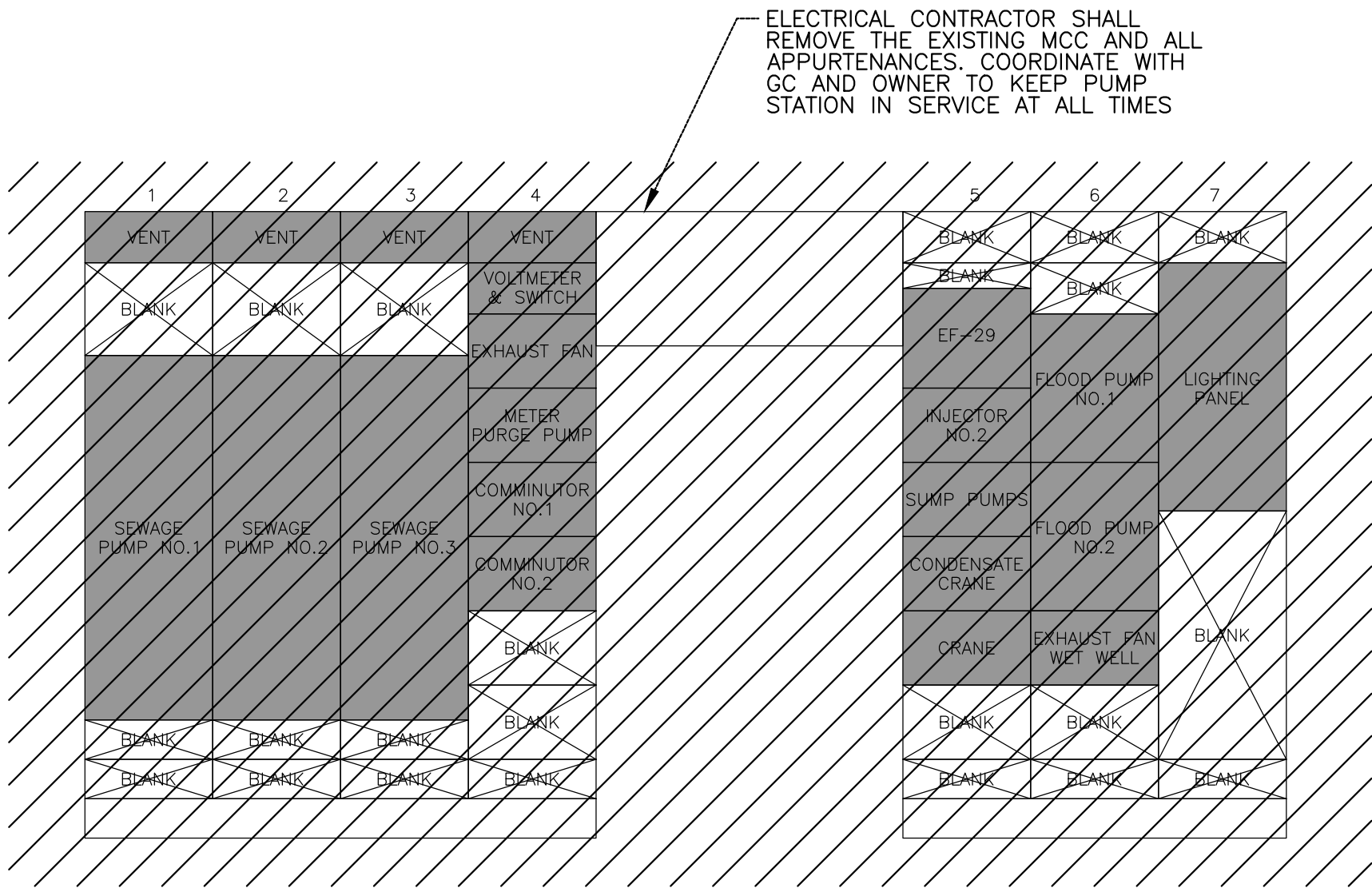
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55 31 31 NORTH MAIN STREET, LIBERTY, NY 12554 • 845.747.9852
6 TOWNSEND STREET, WALTON, NY 13856 • 607.865.9235
16145T MARKET ST. RED HOOK, NY 12574 • 518.452.1290
58 BROADWAY, MONTICELLO, NY 12761 • 845.704.7277

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SCALE:	NTS
REVIEWED BY:	AA
PROJECT NO.:	19-1843
FILE:	



SCALE: NTS



SCALE: NTS

1. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE THE EXISTING MCC.
2. THE ELECTRICAL CONTRACTOR SHALL FOLLOW THE SEQUENCING SPECIFICATION 01305 FOR REMOVING, INSTALLING, AND STARTING UP EQUIPMENT.

[illegible]

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SMPS EXISTING
ONE-LINE

E-002

DATE:	01/22
DRAWN BY:	KMM
SCALE:	NTS
REVIEWED BY:	AA
PROJECT NO.:	19-184
FILE:	

**DELAWARE
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BID PLANS

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1. THE ELECTRICAL CONTRACTOR SHALL FOLLOW THE SEQUENCING SPECIFICATION 01305 FOR REMOVING, INSTALLING, AND STARTING UP EQUIPMENT.

BID PLANS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SMPS NEW
ONE-LINE

E-003

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS



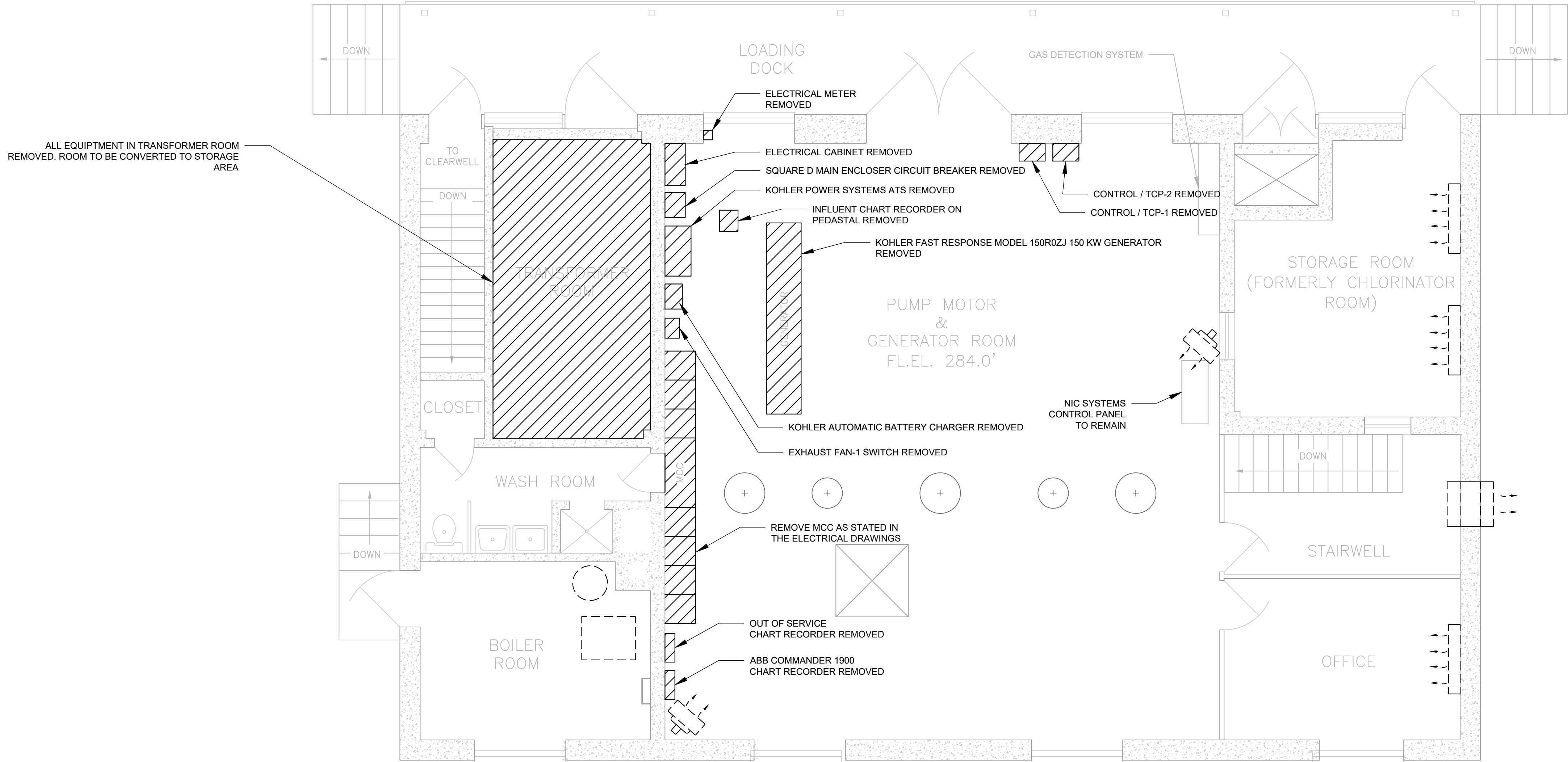
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 156 EAST MARKET ST., RED HOOK, NY 12571 • 518.452.1290
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SCALE:	NTS
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PROJECT NO.:	19-1843
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SMPS FIRST FLOOR ELECTRICAL DEMO PLAN
SCALE: 1/4"=1'

NOTES:

1. ALL INFORMATION SHOWN IS FROM RECORD DRAWINGS. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS
2. E.C. TO REMOVE ALL CONDUIT, WIRES, ETC. ASSOCIATED WITH REMOVED LIGHTING AND EQUIPMENT
3. E.C. TO REMOVE ALL ELECTRICAL RECEPTACLES AND ASSOCIATED CONDUIT.
4. E.C. TO LOCATE AND VERIFY ALL ELECTRICAL COMPONENTS FOR REMOVAL ON SITE.
5. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN WWTP OPERATIONS.

BID PLANS

PUMP STATION
FIRST FLOOR
ELECTRICAL DEMO PLAN

SHEET:

E-101

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS





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811 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.0962

16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290

548 BROADWAY, MONTICELLO, NY 12521 - 845.791.7777

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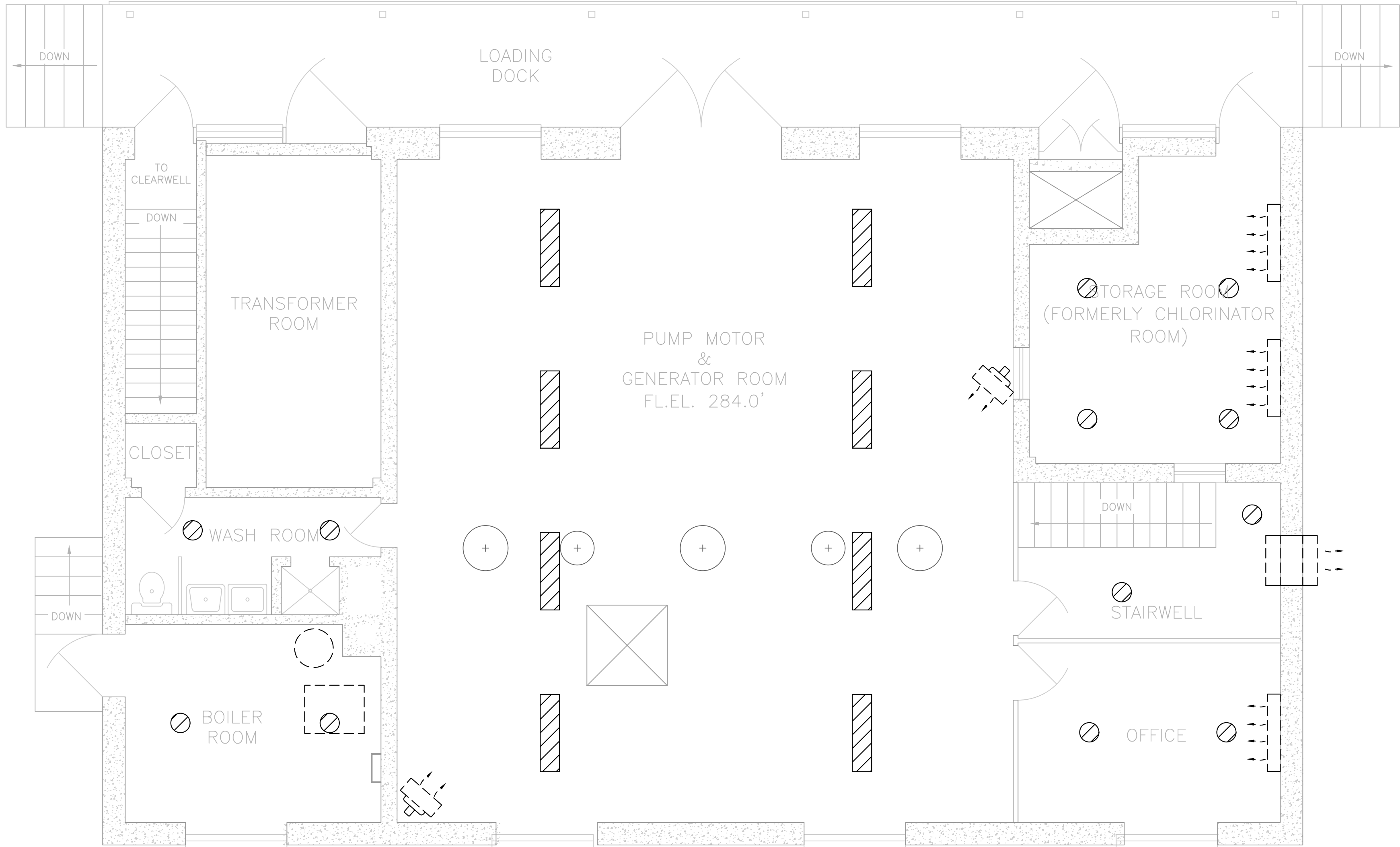
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REVIEWED BY: AA

PROJECT NO.: 19-1843

FILE: SMPS_PUMP_STATION_ELEC_ADD.DWG

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SMPS FIRST FLOOR LIGHTING DEMO PLAN

SCALE: 1/4"=1'

NOTES:

1. ALL INFORMATION SHOWN IS FROM RECORD DRAWINGS. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS
2. E.C. TO REMOVE ALL CONDUIT, WIRES, ETC. ASSOCIATED WITH REMOVED LIGHTING AND EQUIPMENT
3. E.C. TO REMOVE ALL ELECTRICAL RECEPTACLES AND ASSOCIATED CONDUIT.
4. E.C. TO LOCATE AND VERIFY ALL ELECTRICAL COMPONENTS FOR REMOVAL ON SITE.
5. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN WWTP OPERATIONS.

BID PLANS

SHEET:

PUMP STATION
FIRST FLOOR
LIGHTING DEMO PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS

NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

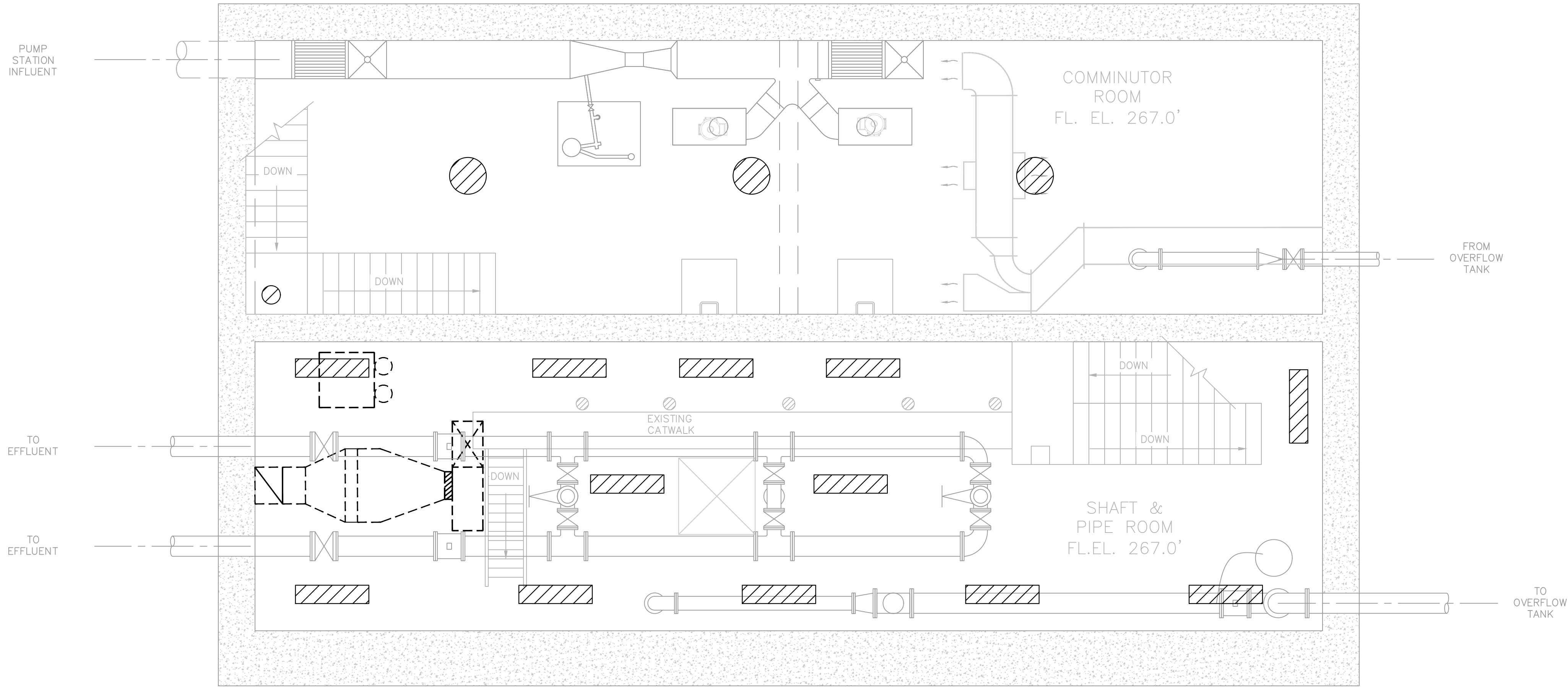


**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST., ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, 11, LIBERTY, NY 12544 - 518.516.9862
111 WEST MAIN STREET, 11, ALBANY, NY 12204 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: SMPS_PUMP_STATION_ELEC_ADD1.DWG

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SMPS INTERMEDIATE FLOOR LIGHTING DEMO PLAN
SCALE: 1/4"=1'

NOTES:

1. ALL INFORMATION SHOWN IS FROM RECORD DRAWINGS. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS
2. E.C. TO REMOVE ALL CONDUIT, WIRES, ETC. ASSOCIATED WITH REMOVED LIGHTING AND EQUIPMENT
3. E.C. TO REMOVE ALL ELECTRICAL RECEPTACLES AND ASSOCIATED CONDUIT.
4. E.C. TO LOCATE AND VERIFY ALL ELECTRICAL COMPONENTS FOR REMOVAL ON SITE.
5. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN WWTP OPERATIONS.

BID PLANS

PUMP STATION
INTERMEDIATE FLOOR
LIGHTING DEMO PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS



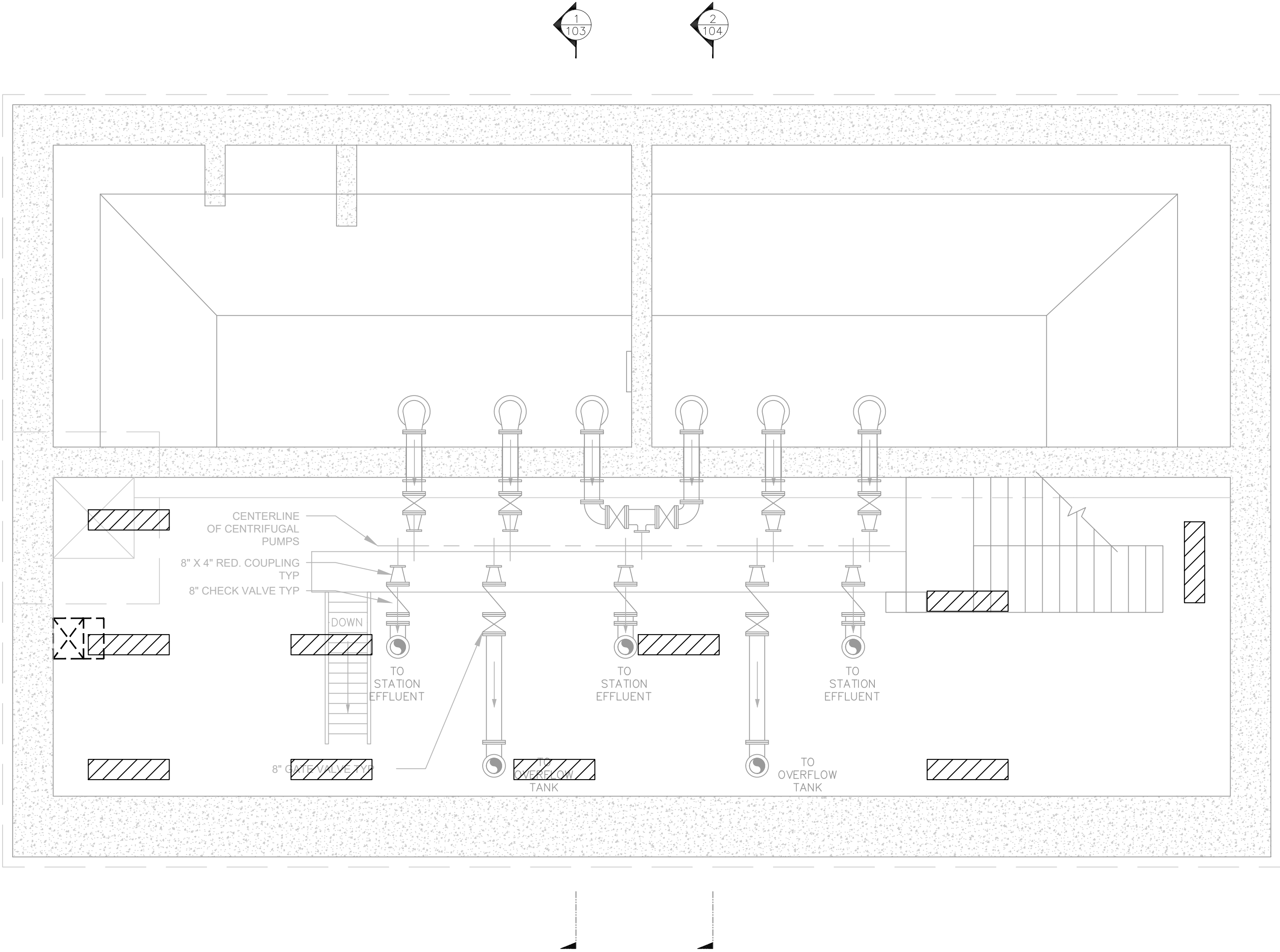
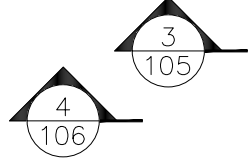
**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE:	01/22
DRAWN BY:	MULLERK
SCALE:	1/4" = 1'-0"
REVIEWED BY:	AA
PROJECT NO.:	19-1843
FILE:	SMPS_PUMP_STATION_ELEC_ADD.DWG

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FILE: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SMPS_PUMP_STATION_ELEC_ADD.DWG Saved: 5/17/2022 4:56:47 PM Plotted: 5/17/2022 4:57:01 PM User: Kyle Muller LastSavedBy: mullerk



SMPS LOWER FLOOR LIGHTING DEMO PLAN
SCALE: 1/4"=1'

- NOTES:**
1. ALL INFORMATION SHOWN IS FROM RECORD DRAWINGS. CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS
 2. E.C. TO REMOVE ALL CONDUIT, WIRES, ETC. ASSOCIATED WITH REMOVED LIGHTING AND EQUIPMENT
 3. E.C. TO REMOVE ALL ELECTRICAL RECEPTACLES AND ASSOCIATED CONDUIT.
 4. E.C. TO LOCATE AND VERIFY ALL ELECTRICAL COMPONENTS FOR REMOVAL ON SITE.
 5. CONTRACTOR SHALL SCHEDULE DEMOLITION WORK IN SEQUENCE WITH NEW CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN WWTP OPERATIONS.

BID PLANS

SHEET:

E-104

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
LOWER FLOOR
LIGHTING DEMO PLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

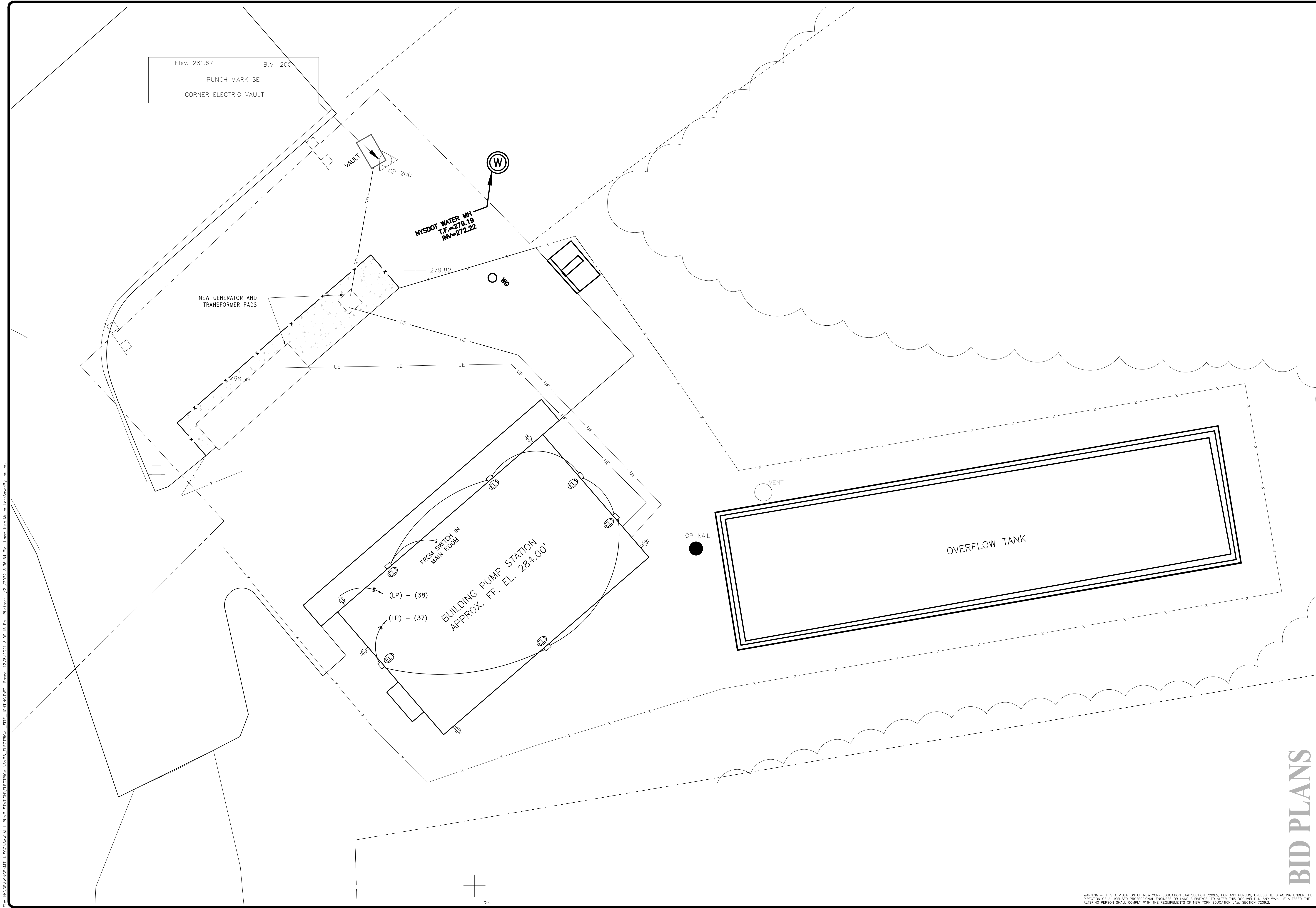


**DELAWARE
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CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET 11, LIBERTY, NY 12544 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: SMPS_PUMP_STATION_ELEC_ADD.DWG

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BID PLANS

DATE:	01/22
DRAWN BY:	KMM
SCALE:	1"=10'
REVIEWED BY:	AA
PROJECT NO.:	19-1843
FILE:	

**DELAWARE
ENGINEERING, D.P.C.**

CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, LIBERTY, NY 12543 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777



REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PROPOSED SITE
LIGHTING

SHEET:
E-105

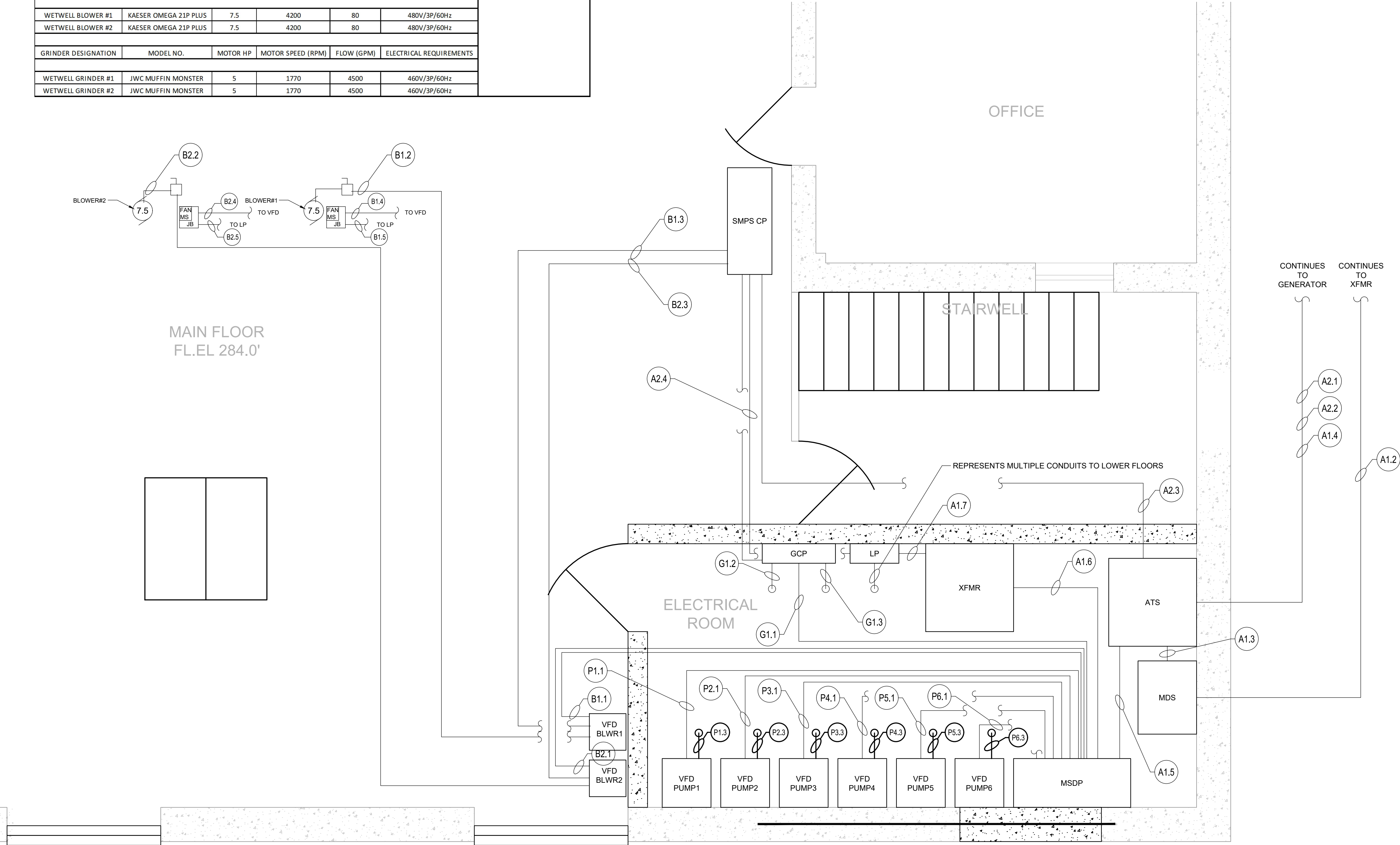
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PUMP DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM) at TDH (Ft.)	ELECTRICAL REQUIREMENTS
EFFLUENT PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #2	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #3	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #4	SULZER/ABS XFP 105J-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
STORM PUMP #1	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
STORM PUMP #2	SULZER/ABS XFP 105J-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
SUMP PUMP #1	N/A	5	N/A	N/A	460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A	460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz
WETWELL BLOWER #2	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz

GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
WETWELL GRINDER #1	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz
WETWELL GRINDER #2	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz



SMPS FIRST FLOOR ELECTRICAL POWER PLAN
SCALE: 1/2"=1'

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/2" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: saw_mill_station_elec_addit.dwg

DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.536.6962
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777



NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

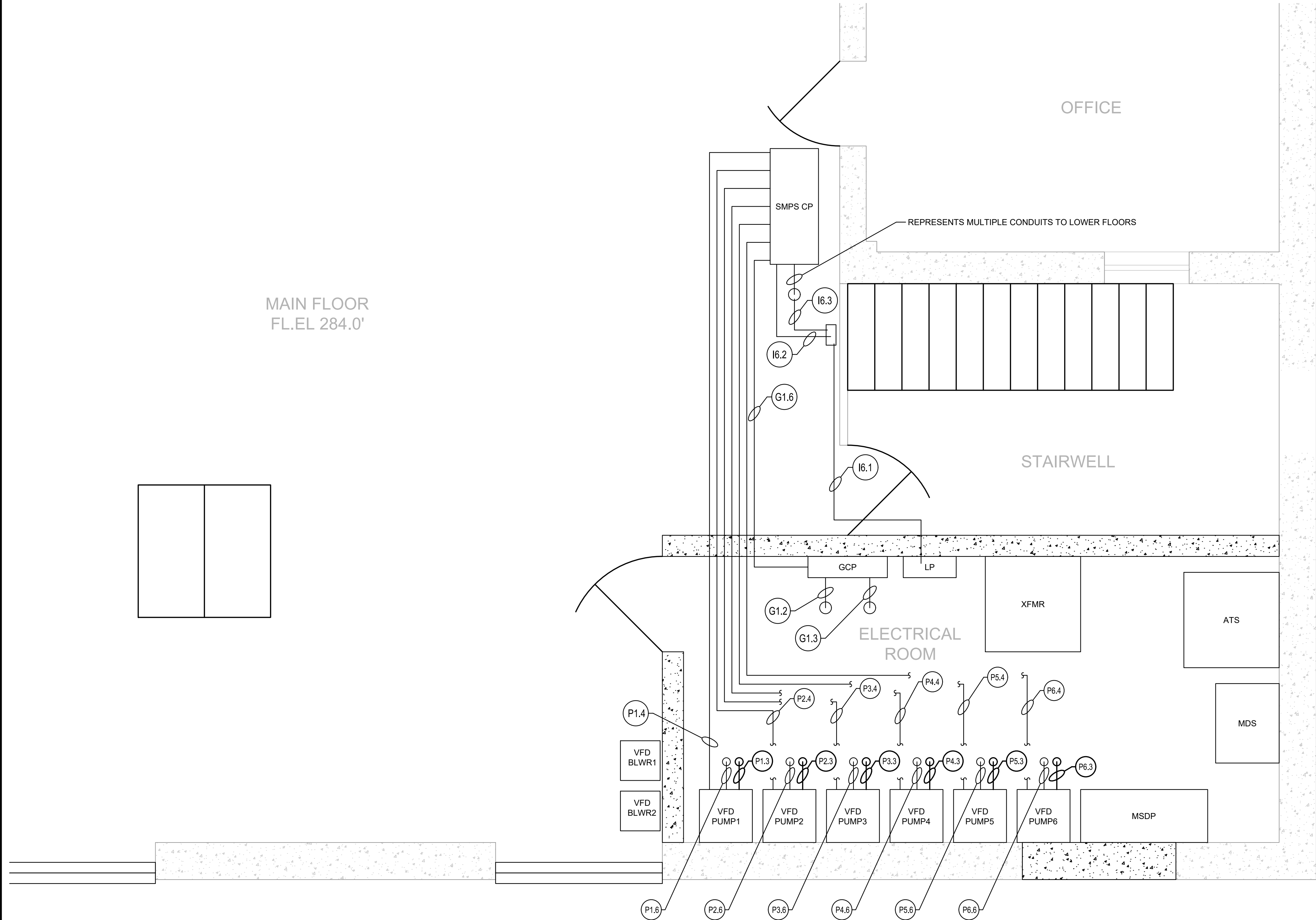
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
FIRST FLOOR
ELECTRICAL POWER PLAN

SHEET:
E-106

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SMPS FIRST FLOOR ELECTRICAL CONTROL PLAN
SCALE: 1/2"=1'

BID PLANS

PUMP STATION
FIRST FLOOR
ELECTRICAL CONTROL
PLAN

SHEET:

E-107

REVISIONS		DESCRIPTION	
NO.	DATE	DESCRIPTION	BY
1	11/3/21	BID PLANS	
2	12/8/21	ADDendum #1	

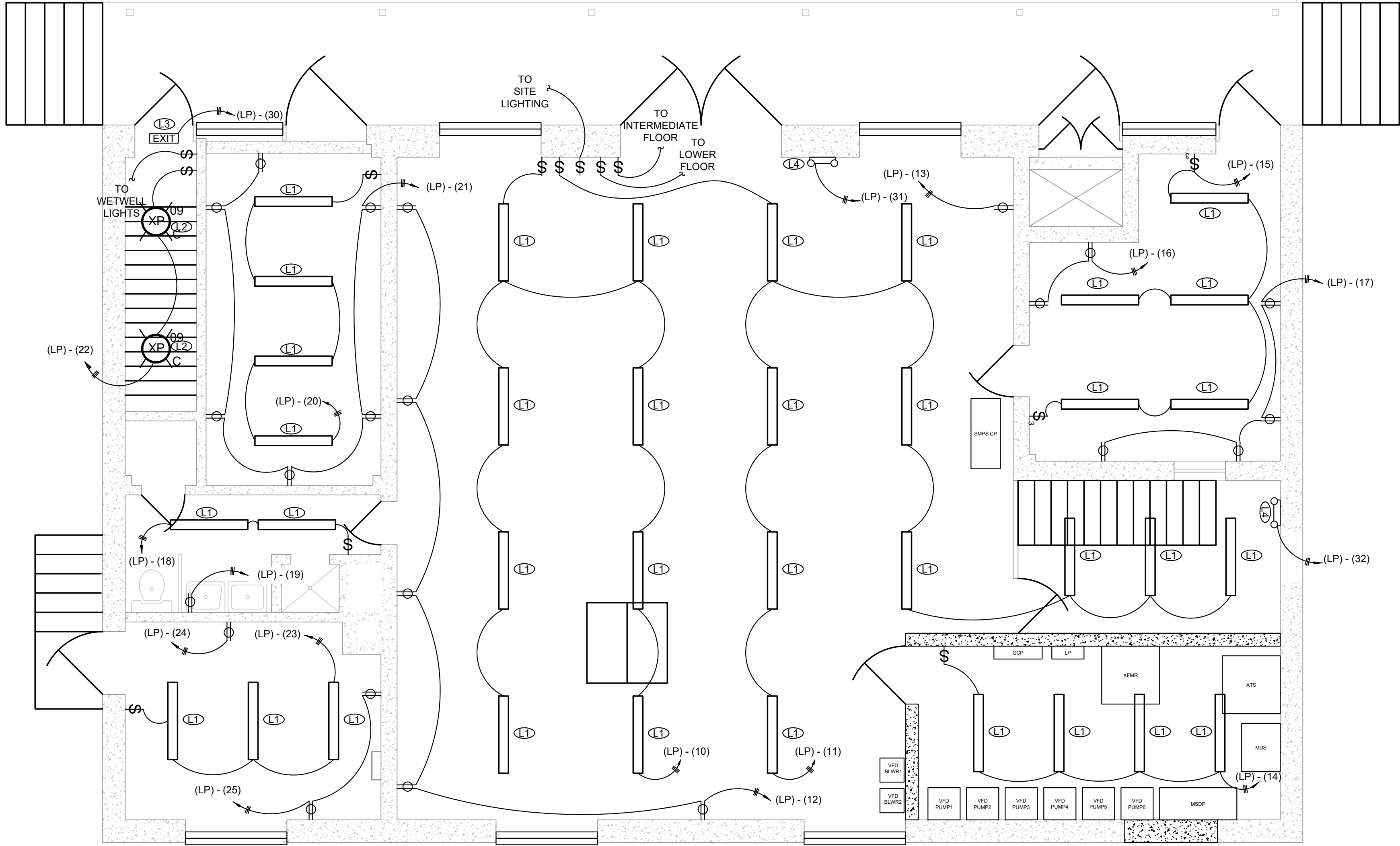


DELAWARE ENGINEERING, D.P.C.
CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
311 NORTH MAIN STREET, LIBERTY, NY 12543 - 518.452.1290
811 NORTH MAIN STREET, ALBANY, NY 12204 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12531 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/2" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: smps_pump_station_elec_add.dwg

FILE: H:\DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SMPS_PUMP_STATION_ELEC_ADD.DWG Saved: 5/17/2022 4:56:47 PM Plotted: 5/17/2022 4:57:03 PM User: Kyle Muller LastSavedBy: muller



SMPS FIRST FLOOR LIGHTING PLAN
SCALE: 1/4"=1'

BID PLANS

PUMP STATION
FIRST FLOOR
ELECTRICAL LIGHTING
PLAN

SHEET:
E-108

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS



**DELAWARE
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CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.536.9862
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12571 - 845.791.7777

DATE: 01/22

DRAWN BY: MULLERK

SCALE: 1/4" = 1'-0"

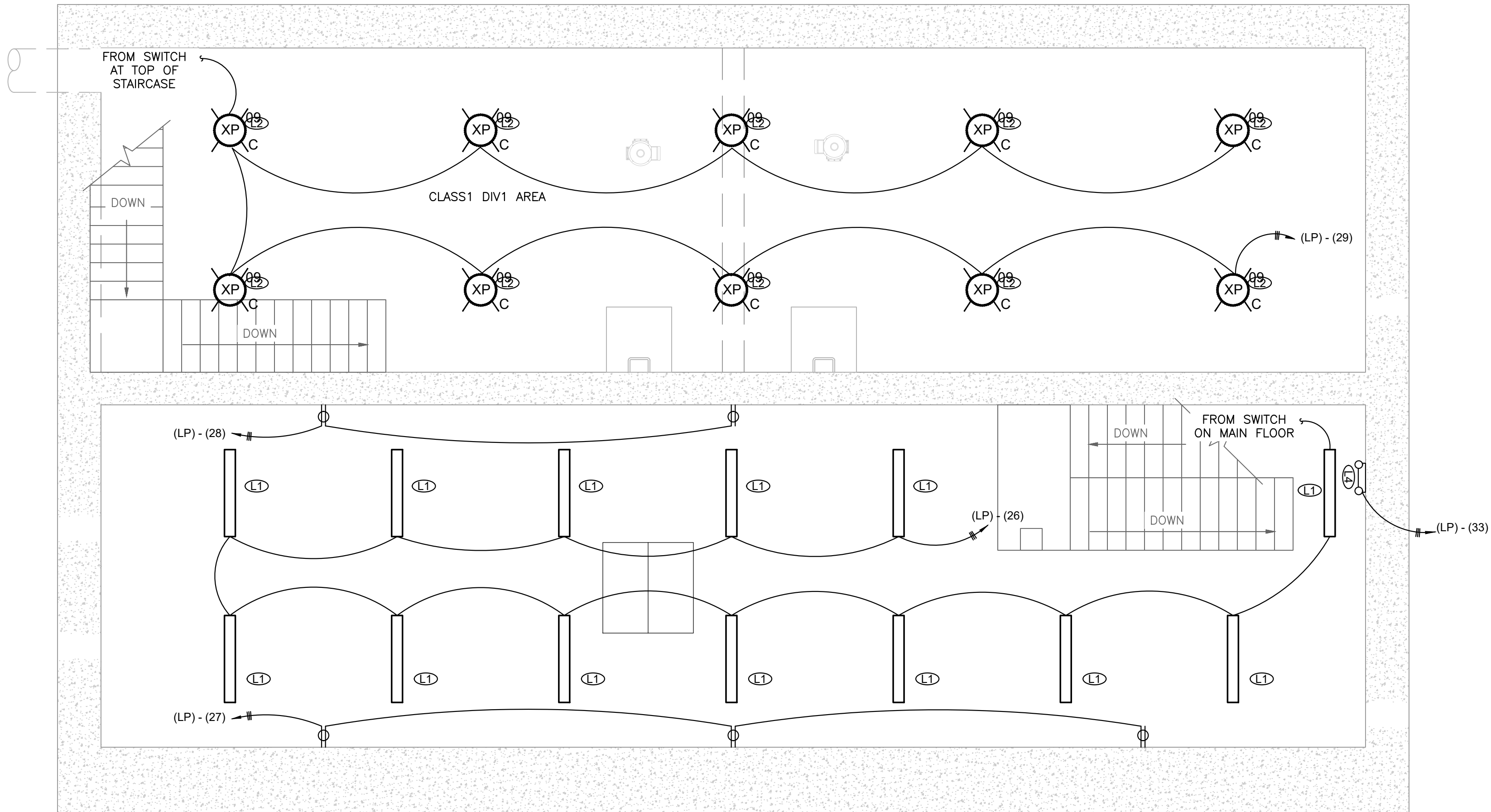
REVIEWED BY: AA

PROJECT NO.: 19-1843

FILE: SAW MILL PUMP STATION_ELEC_ADD.DWG

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SMPS INTERMEDIATE FLOOR LIGHTING PLAN
SCALE: 1/4"=1'

BID PLANS

PROPOSED
INTERMEDIATE FLOOR
LIGHTING
PLAN

SHEET:

E-110

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS

NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS



**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, LIBERTY, NY 12543 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: smps_pump_station_elec_add.dwg

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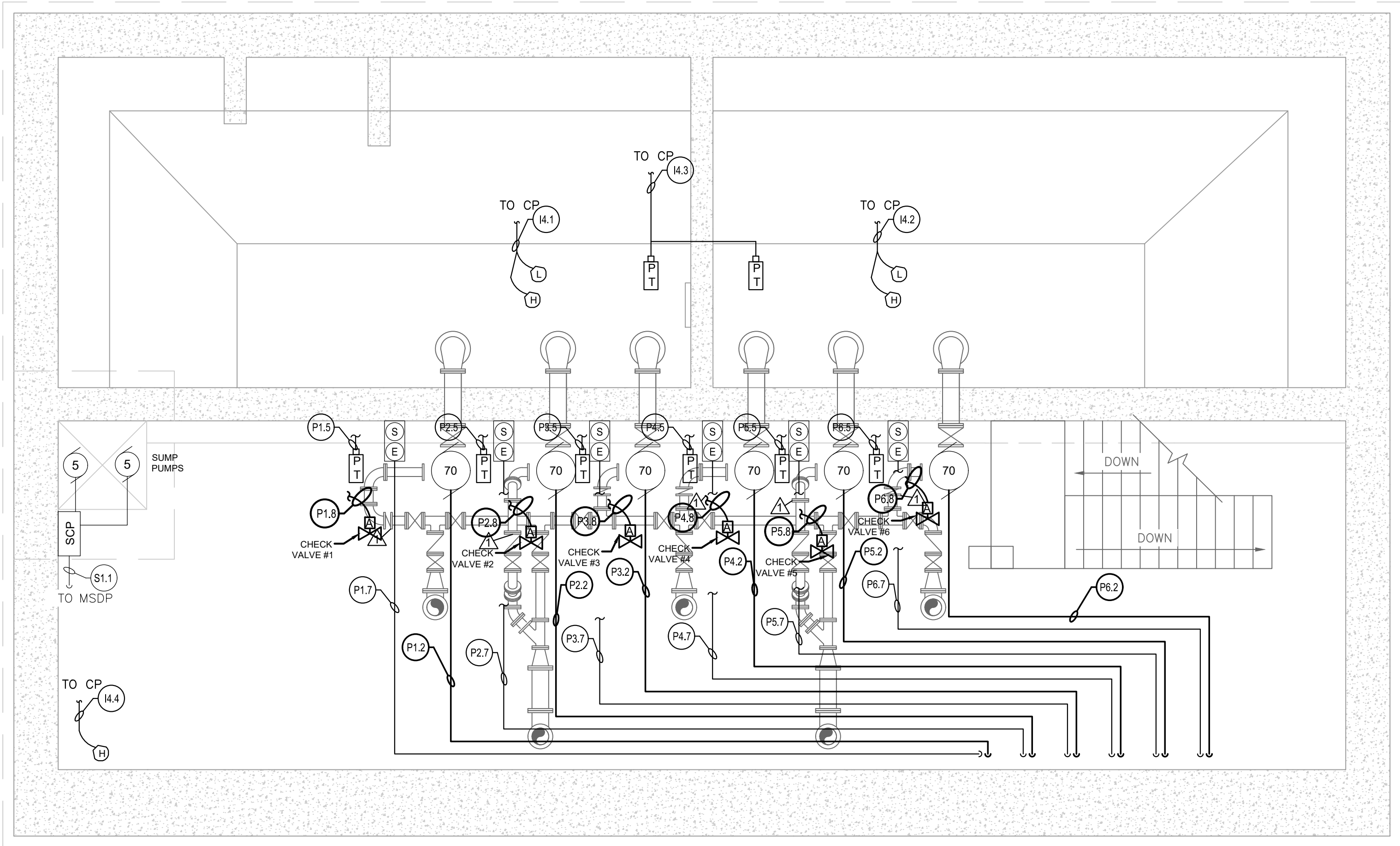
PUMP DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM) at TDH (Ft.)	ELECTRICAL REQUIREMENTS
EFFLUENT PUMP #1	SULZER/ABS XFP 105I-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #2	SULZER/ABS XFP 105I-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #3	SULZER/ABS XFP 105I-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
EFFLUENT PUMP #4	SULZER/ABS XFP 105I-CB2	70	1800	700 GPM @ 137' TDH / 1180 GPM @ 113' TDH	460V/3P/60Hz
STORM PUMP #1	SULZER/ABS XFP 105I-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
STORM PUMP #2	SULZER/ABS XFP 105I-CB2	70	1800	900 GPM @ 26' TDH	460V/3P/60Hz
SUMP PUMP #1	N/A	5	N/A	N/A	460V/3P/60Hz
SUMP PUMP #2	N/A	5	N/A	N/A	460V/3P/60Hz

BLOWER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	SCFM	ELECTRICAL REQUIREMENTS
WETWELL BLOWER #1	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz
WETWELL BLOWER #2	KAESER OMEGA 21P PLUS	7.5	4200	80	480V/3P/60Hz

GRINDER DESIGNATION	MODEL NO.	MOTOR HP	MOTOR SPEED (RPM)	FLOW (GPM)	ELECTRICAL REQUIREMENTS
WETWELL GRINDER #1	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz
WETWELL GRINDER #2	JWC MUFFIN MONSTER	5	1770	4500	460V/3P/60Hz

NOTES:

⚠CHECK VALVES NOTED TO RECIEVE A LIMIT SWITCH, WIRED BACK TO THE CONTROL WITH 4 - #14 WIRE IN A 3/4" CONDUIT EACH. LIMIT SWITCHES TO BE PROGRAMMED FOR WHEN NOT CLOSED = OPEN, RUN PUMP



SMPS LOWER FLOOR POWER/CONTROL PLAN
SCALE: 1/4"=1'

BID PLANS

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: SWS_PUMP_STATION_ELEC_ADD.DWG

**DELAWARE
ENGINEERING, D.P.C.**

CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET 11, LIBERTY, NY 12544 - 518.452.6362
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777



NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

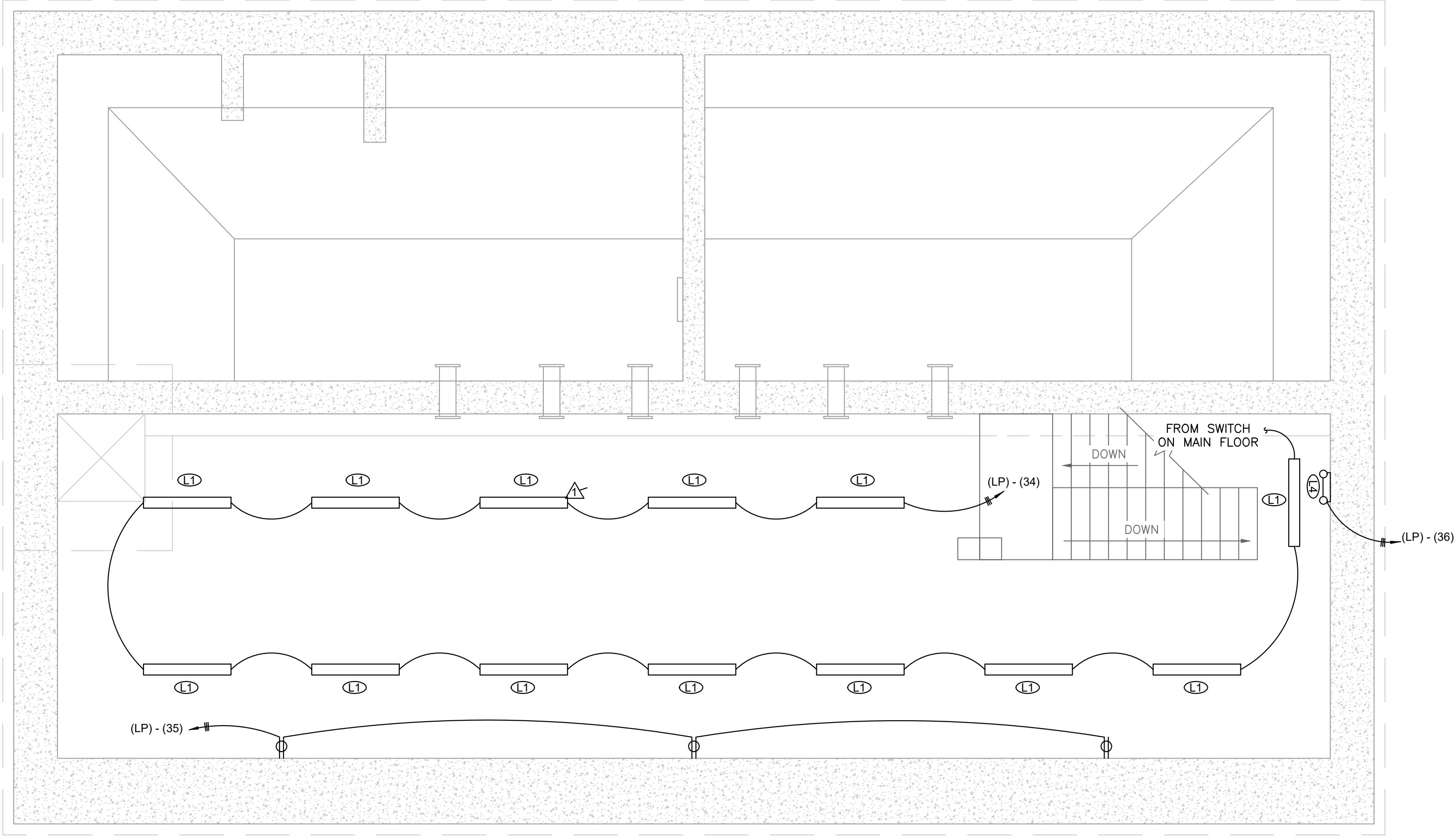
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

PUMP STATION
LOWER FLOOR
POWER/CONTROL
PLAN

SHEET:
E-111

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SMPS LOWER FLOOR LIGHTING PLAN
SCALE: 1/4"=1'

BID PLANS

PUMP STATION
LOWER FLOOR
LIGHTING
PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	80 PLANS



**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING
28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1290
55 SOUTH MAIN ST. ONEONTA, NY 13820 - 607.432.8073
811 NORTH MAIN STREET, LIBERTY, NY 12546 - 518.452.1290
111 WEST MAIN STREET, ALBANY, NY 12204 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: 1/4" = 1'-0"
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: SMPS_PUMP_STATION_ELEC_ADD.DWG

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SHEET:
E-112

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CONDUIT AND CABLE SCHEDULE								
CONDUIT		CABLE		PURPOSE	FROM	VIA	TO	REMARKS
NO.	SIZE	QTY.	SIZE					
A1.1	4"	4	4/0	POWER	VAULT		UTILITY XFMR	HIGH VOLTAGE CONDUCTORS
A1.2	2-4"	4EA	600KCM	POWER	UTILITY XFMR		MDS	MAIN TRANSFORMER TO MAIN DISCONNECT
A1.3	2-4"	4EA	600KCM	POWER	MDS		ATS	
A1.4	2-4"	4EA	600KCM	POWER	GENERATOR		ATS	
A1.5	2-4"	4EA	600KCM	POWER	ATS		MSDP	
A1.6	1 1/4"	4	#4	POWER	MSDP		LOW VOLTAGE XFMR	
A1.7	2"	4	2/0	POWER	LOW VOLTAGE XFMR		LP	
A2.1	1 1/2"	4	#6	POWER	LP		GENERATOR	
A2.2	2"	12	#14	CONTROL	SMPS CP		GENERATOR	
A2.3	2"	8	#14	CONTROL	SMPS CP		ATS	
A2.4	3/4"	3	#10	POWER	LP		SMPS CP	
G1.1	3/4"	4	#10	POWER	MSDP		GRINDER CONTROL PANEL	
G1.2	3/4"	4	#12	POWER	GRINDER CONTROL PANEL		GRINDER #1 D/C	
G1.3	3/4"	4	#12	POWER	GRINDER CONTROL PANEL		GRINDER #2 D/C	
G1.4	3/4"	4	#12	POWER	GRIDNER #1 D/C		GRINDER #1	
G1.5	3/4"	4	#12	POWER	GRINDER #2 D/C		GRINDER #2	
G1.6	3/4"	1	ETHERNET	CONTROL	GRINDER CONTROL PANEL		SMPS CP	
G1.7	3/4"	6	#14	CONTROL	GRINDER CONTROL PANEL		GRINDER#1	
G1.8	3/4"	6	#14	CONTROL	GRINDER CONTROL PANEL		GRINDER#2	
P1.1	2"	4	#1	POWER	MSDP		PUMP #1 VFD	POWER TO VFD
P1.2	2"	4	#1	POWER	PUMP #1 VFD		PUMP #1	POWER TO PUMP FROM VFD
P1.3	3/4"	6	#14	CONTROL	PUMP #1 VFD		PUMP #1	THERMALS, MOISTURE, FROM PUMP
P1.4	3/4"	1	CAT6	CONTROL	PUMP #1 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P1.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #1 PT	DISCHARGE PRESSURE
P1.6	3/4"	3	#12	POWER	LP		PUMP#1 HTR	
P1.7	3/4"	6	#14	CONTROL	PUMP #1 VFD		PUMP#1 LOCK STOP	
P1.8	3/4"	4	#14	CONTROL	CHECK VALVE #1		PS CONTROL PANEL	
P2.1	2"	4	#1	POWER	MSDP		PUMP #2 VFD	POWER TO VFD
P2.2	2"	4	#1	POWER	PUMP #2 VFD		PUMP #2	POWER TO PUMP FROM VFD
P2.3	3/4"	6	#14	CONTROL	PUMP #2 VFD		PUMP #2	THERMALS, MOISTURE, FROM PUMP
P2.4	3/4"	1	CAT6	CONTROL	PUMP #2 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P2.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #2 PT	DISCHARGE PRESSURE
P2.6	3/4"	3	#12	POWER	LP		PUMP#2 HTR	
P2.7	3/4"	6	#14	CONTROL	PUMP #2 VFD		PUMP#2 LOCK STOP	
P2.8	3/4"	4	#14	CONTROL	CHECK VALVE #2		SMPS CP	
P3.1	2"	4	#1	POWER	MSDP		PUMP #3 VFD	POWER TO VFD
P3.2	2"	4	#1	POWER	PUMP #3 VFD		PUMP #3	POWER TO PUMP FROM VFD
P3.3	3/4"	6	#14	CONTROL	PUMP #3 VFD		PUMP #3	THERMALS, MOISTURE, FROM PUMP
P3.4	3/4"	1	CAT6	CONTROL	PUMP #3 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P3.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #3 PT	DISCHARGE PRESSURE
P3.6	3/4"	3	#12	POWER	LP		PUMP#3 HTR	
P3.7	3/4"	6	#14	CONTROL	PUMP #3 VFD		PUMP#3 LOCK STOP	
P3.8	3/4"	4	#14	CONTROL	CHECK VALVE #3		SMPS CP	
P4.1	2"	4	#1	POWER	MSDP		PUMP #4 VFD	POWER TO VFD
P4.2	2"	4	#1	POWER	PUMP #4 VFD		PUMP #4	POWER TO PUMP FROM VFD
P4.3	3/4"	6	#14	CONTROL	PUMP #4 VFD		PUMP #4	THERMALS, MOISTURE, FROM PUMP
P4.4	3/4"	1	CAT6	CONTROL	PUMP #4 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P4.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #4 PT	DISCHARGE PRESSURE
P4.6	3/4"	3	#12	POWER	LP		PUMP#4 HTR	
P4.7	3/4"	6	#14	CONTROL	PUMP #4 VFD		PUMP#4 LOCK STOP	
P4.8	3/4"	4	#14	CONTROL	CHECK VALVE #4		SMPS CP	
P5.1	2"	4	#1	POWER	MSDP		PUMP #5 VFD	POWER TO VFD
P5.2	2"	4	#1	POWER	PUMP #5 VFD		PUMP #5	POWER TO PUMP FROM VFD
P5.3	3/4"	6	#14	CONTROL	PUMP #5 VFD		PUMP #5	THERMALS, MOISTURE, FROM PUMP
P5.4	3/4"	1	CAT6	CONTROL	PUMP #5 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P5.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #5 PT	DISCHARGE PRESSURE
P5.6	3/4"	3	#12	POWER	LP		PUMP#5 HTR	
P5.7	3/4"	6	#14	CONTROL	PUMP #5 VFD		PUMP#5 LOCK STOP	
P5.8	3/4"	4	#14	CONTROL	CHECK VALVE #5		SMPS CP	
P6.1	2"	4	#1	POWER	MSDP		PUMP #6 VFD	POWER TO VFD
P6.2	2"	4	#1	POWER	PUMP #6 VFD		PUMP #6	POWER TO PUMP FROM VFD
P6.3	3/4"	6	#14	CONTROL	PUMP #6 VFD		PUMP #6	THERMALS, MOISTURE, FROM PUMP
P6.4	3/4"	1	CAT6	CONTROL	PUMP #6 VFD		SMPS CP	START, RUN STATUS, FAULT, HOA STATUS, SPEED, ETC.
P6.5	3/4"	1	#16 TS	CONTROL	SMPS CP		PUMP #6 PT	DISCHARGE PRESSURE
P6.6	3/4"	3	#12	POWER	LP		PUMP#6 HTR	
P6.7	3/4"	6	#14	CONTROL	PUMP #6 VFD		PUMP#6 LOCK STOP	
P6.8	3/4"	4	#14	CONTROL	CHECK VALVE #6		SMPS CP	

CONDUIT AND CABLE SCHEDULE								
CONDUIT		CABLE		PURPOSE	FROM	VIA	TO	REMARKS
NO.	SIZE	QTY.	SIZE					
I1.1	3/4"	3	#12	POWER	LP		FLOW METER CONTROL BOX #1	
I1.2	3/4"	2	16TS	CONTROL	SMPS CP		FLOW METER CONTROL BOX #1	
I1.3	3/4"	1	VSC	POWER / CONTROL	EFFLUENT FLOW METER #1		FLOW METER CONTROL BOX #1	VENDOR SUPPLIED CABLE
I2.1	3/4"	3	#12	POWER	LP		FLOW METER CONTROL BOX #2	
I2.2	3/4"	2	16TS	CONTROL	SMPS CP		FLOW METER CONTROL BOX #2	
I2.3	3/4"	1	VSC	POWER / CONTROL	EFFLUENT FLOW METER #2		FLOW METER CONTROL BOX #2	VENDOR SUPPLIED CABLE
I3.1	3/4"	3	#12	POWER	LP		STORM METER CONTROL BOX	
I3.2	3/4"	2	16TS	CONTROL	SMPS CP		STORM METER CONTROL BOX	
I3.3	3/4"	1	VSC	POWER / CONTROL	STORM FLOW METER		STORM METER CONTROL BOX	VENDOR SUPPLIED CABLE
I4.1	3/4"	4	#14	CONTROL	SMPS CP		WETWELL#1 FLOATS	HIGH / LOW LEVEL FLOATS
I4.2	3/4"	4	#14	CONTROL	SMPS CP		WETWELL#2 FLOATS	HIGH / LOW LEVEL FLOATS
I4.3	3/4"	2	16TS	CONTROL	SMPS CP		WETWELL LEVEL TRANS.	1-#16TS PER WETWELL TRANSDUCER
I4.4	3/4"	2	#14	CONTROL	SMPS CP		PUMP GALLERY FLOAT	ROOM FLOOD ALARM FLOAT
I4.5	3/4"	2	#14	CONTROL	INFLUENT CHANNEL FLOAT		SMPS CP	HIGH LEVEL INFLUENT CHANNEL FLOAT
I5.1	3/4"	3	#16TS	CONTROL	WETWELL #1 SENSORS		SMPS CP	OXYGEN, HYDROGEN, LEL SENSOR
I5.2	3/4"	3	#16TS	CONTROL	WETWELL #2 SENSORS		SMPS CP	OXYGEN, HYDROGEN, LEL SENSOR
S1.1	3/4"	6	#12	POWER	LP		SUMP PUMP PANEL	3 #12 PER SUMP PUMP
H1.1	3/4"	3	#12	POWER	LP		UNIT HEATER 1	
H1.2	3/4"	3	#12	POWER	LP		UNIT HEATER 2	
H1.3	3/4"	3	#12	POWER	LP		UNIT HEATER 3	
H1.4	3/4"	3	#12	POWER	LP		UNIT HEATER 4	
H1.5	3/4"	3	#12	POWER	LP		UNIT HEATER 5	
H1.6	3/4"	3	#12	POWER	LP		UNIT HEATER 6	
H2.1	3/4"	6	#18	CONTROL	ZONE CONTROLLER		TSTAT Z1	
H2.2	3/4"	6	#18	CONTROL	ZONE CONTROLLER		TSTAT Z2	
H2.3	3/4"	6	#18	CONTROL	ZONE CONTROLLER		TSTAT Z3	
H3.1	3/4"	4	#12	POWER	LP		BOILER	
H4.1	3/4"	4	#12	POWER	MSDP		EF1	
H4.2	3/4"	4	#12	POWER	MSDP		EF2	
H4.3	3/4"	3	#12	POWER	LP		EF3	
H5.1	3/4"	4	#10	POWER	LP		HP1	
B1.1	3/4"	4	#10	POWER	MSDP		BLOWER #1 VFD	
B1.2	3/4"	4	#10	POWER	BLOWER #1 VFD		BLOWER #1	
B1.3	3/4"	1	CAT6	CONTROL	BLOWER #1 VFD		SMPS CP	
B1.4	3/4"	6	#14	CONTROL	BLOWER #1 VFD		BLOWER#1	
B1.5	3/4"	3	#12	POWER	LP		BLOWER#1	
B2.1	3/4"	4	#10	POWER	MSDP		BLOWER #2 VFD	
B2.2	3/4"	4	#10	POWER	BLOWER #2 VFD		BLOWER #2	
B2.3	3/4"	1	CAT6	CONTROL	BLOWER #2 VFD		SMPS CP	
B2.4	3/4"	6	#14	CONTROL	BLOWER #2 VFD		BLOWER#2	
B2.5	3/4"	3	#12	POWER	LP		BLOWER#2	
I6.1	3/4"	3	#12	POWER	LP		INF FM TRANS	
I6.2	3/4"	3	#12	POWER	SMPS CP		INF FM TRANS	
I6.3	3/4"	1	VSC	CONTROL	INF FM TRANS		INF FM	
I6.4	3/4"	2	16TS	CONTROL	SMPS CP		PRESS TRANSDUCERS	
I6.5	3/4"	1	16TS	CONTROL	SMPS CP		STORM PRESS TRANS	

LOAD SERVED	WATTS PER PHASE			CKT. BRKR.	CKT. NO.	NEUTRAL A B C	CKT. NO.	CKT. BRKR.	WATTS PER PHASE			LOAD SERVED
	A	B	C						A	B	C	
SMPS CP	1800			30	1		2	20	450			UNIT HTRS #3, #4
UNIT HTRS #1, #2		952		20	3		4	20		414		UNIT HTRS #5, #6
GENERATOR BATT CHARGER			1300	20	5		6	20			444	BOILER
GENERATOR BLOCK HTR	1500			30	7		8	20	1000			EF3
INSTRUMENTATION		6000		20	9		10	20		500		LTS 1ST FLR CIR1
LTS 1ST FLR CIR2			500	20	11		12	20			-	REC 1ST FLR CIR1
REC 1ST FLR CIR2	-			20	13		14	20	-			REC ELECTRIC RM
LTS OFFICE		300		20	15		16	20		-		REC OFFICE CIR 1
REC OFFICE CIR2			-	20	17		18	20			200	LTS BATH
REC BATH	-			20	19		20	20	200			LTS STORAGE
REC STORAGE		-		20	21		22	20		1000		LTS WETWELL
LTS BOILER			150	20	23		24	20			-	REC BOILER RM CIR1
REC BOILER RM CIR 2	-			20	25		26	20	600			LTS INT LEVEL
REC INT LEVEL CIR1		-		20	27		28	20		-		REC INT LEVEL CIR2
PUMP HEATER #1			198	20	29		30	20			-	EXIT LTS WETWELL
EMERGENCY LTS	200			20	31		32	20	200			EMERGENCY LTS
PUMP HEATER #3		198		20	33		34	20		800		LTS PUMP GALLERY
REC PUMP GALLERY			-	20	35		36	20			5000	SUMP PUMP CP
PUMP HEATER #5	198			20	37		38	20	198			PUMP HEATER #2
HP1		4000		40	39		40	20		198		PUMP HEATER #4
			4000	40	41		42	20			198	PUMP HEATER #6
AIC RATING	10,000	AMPS	-	-	-	SUBTOTAL B			SUBTOTAL A	-	-	-
RATING	208/120	V, 3	Ø, 4	W, 2/0					SUBTOTAL B	-	-	-
MOUNTING SURFACE			GROUND BUS	☒ YES	☐ NO		YES	SN	GRAND TOT.	-	-	-
MAIN CIRCUIT BREAKER RATING			150	AMPS								
MAIN BUS RATING	200	AMPS							AMPS PER PHASE	-	-	-

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DATE: 01/22
DRAWN BY: MULLERK
SCALE: N.T.S.
REVIEWED BY: AA
PROJECT NO.: 19-1843
FILE: SAW MILL PUMP STATION_ELEC_ADD.DWG

DELAWARE
ENGINEERING, D.P.C.

CIVIL AND ENVIRONMENTAL ENGINEERING

28 MADISON AVENUE EXTENSION, ALBANY, NY 12203 - 518.452.1280
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311 NORTH MAIN STREET 11, LIBERTY, NY 12543 - 518.545.6362
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1280
548 BROADWAY, MONTICELLO, NY 12071 - 845.791.7777



REVISIONS		DESCRIPTION
NO.	DATE	
1	11/3/21	BID PLANS
2	12/8/21	ADDENDUM #1

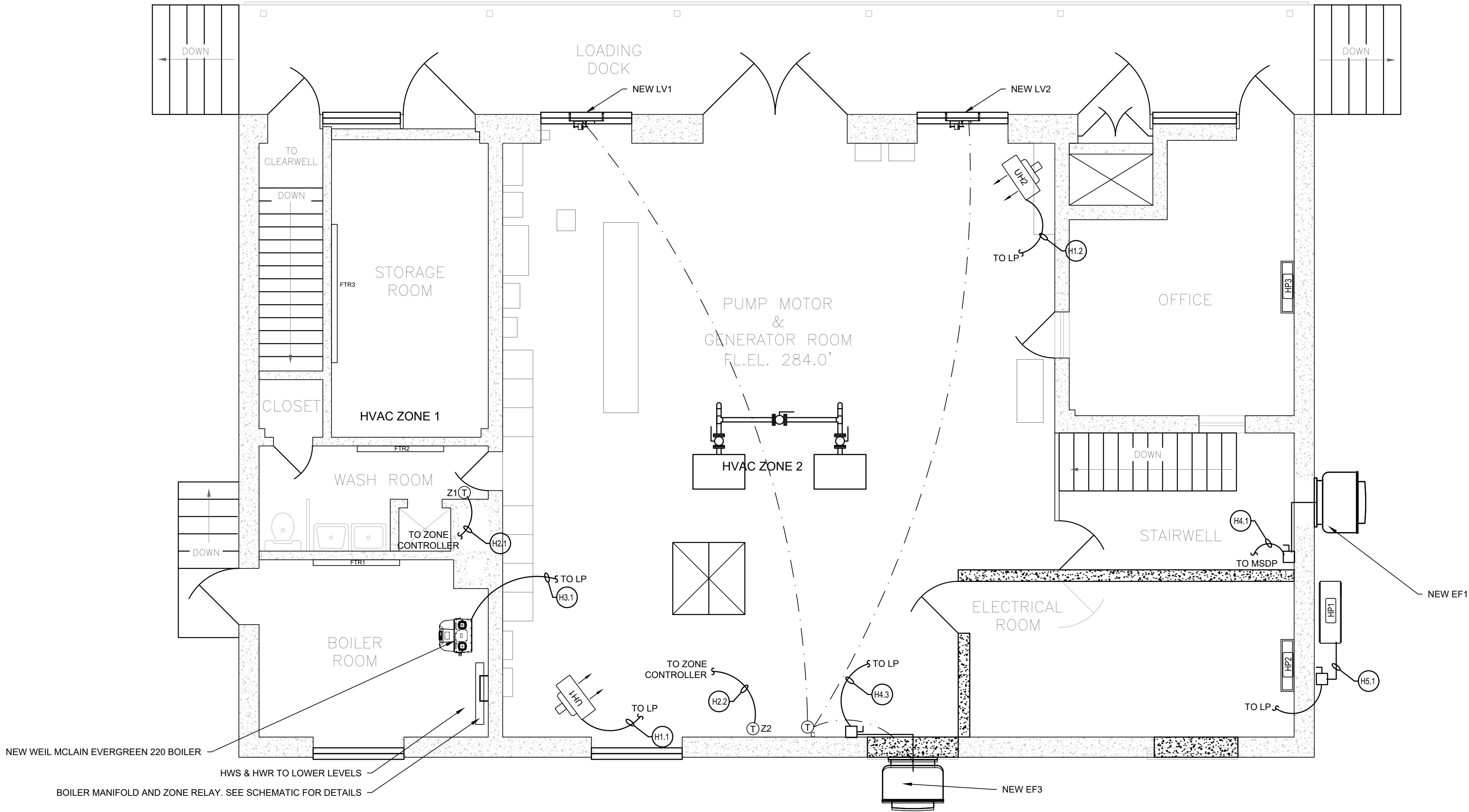
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

CONDUIT & PANEL
SCHEDULE

SHEET:
E-113

BID PLANS

File: H: DRAWINGS\MT_KISCO\SAW MILL PUMP STATION\SMPS_PUMP_STATION_ELEC_HVAC.DWG Saved: 4/22/2022 4:26:18 PM Plotted: 5/17/2022 4:56:54 PM User: Kyle Muller LastSavedBy: mullerk



SMPS MAIN FLOOR HVAC ELECTRICAL PLAN

SCALE: 1/4"=1'

UNIT HEATER SCHEDULE

ID	LOCATION	MANUFACTURER AND MODEL NUMBER	TYPE	BTU	GPM	EWL (Df)	LWT (Df)	VOLT/PH/HZ	MAX MTG HGT (FT)	NOTES
UH-1	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-2	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-3	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-4	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-5	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-6	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	

LOUVER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	CFM	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	NOTES
LV-1	GREENHECK ECD-601	MAIN FLOOR	STATIONARY EXTRUDED, DRAINABLE BLADE	1250	24	24	6	1
LV-2	GREENHECK ECD-601	MAIN FLOOR	STATIONARY EXTRUDED, DRAINABLE BLADE	1250	24	24	6	1

NOTES:

1. PROVIDE WALL SLEEVE, CHANNEL FRAME, BAKED ENAMEL FINISH (COLOR TBD), BIRDSCREEN, 120V ACTUATOR

VRF HEAT PUMP SYSTEM

ID	MANUFACTURER	LOCATION	MODEL NUMBER	COOLING/HEATING CAPACITY (BTU/HR)	VOLT/PH/HZ	REFRIGERANT
HP-1	DAIKIN	OUTDOOR	MXZ-3C24NAHZ-U1	22,000/25,000	208-230/1/60	R410A
HP-2	MITSUBISHI	OFFICE	MSZ-FH12NA-U1	12,000/12,300	208-230/1/60	R410A
HP-3	MITSUBISHI	ELECTRIC ROOM	MSZ-FH12NA-U1	12,000/12,300	208-230/1/60	R410A

HYPER-HEAT
NOTE 1: PROVIDE PAC-YT53CRAU-J CONTROLLER

MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (L.B.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA *
1	EF1 - PUMP RM	CUBE-240-7	4,000	0.5	619	0.66	136	0.75	460/60/3	TF	1725	1	1.6
1	EF2 - INFLUENT	CUBE-200-15	3,500	1	992	1.18	212	1.5	460/60/3	EX	1725	1	3
1	EF3	CUBE-240-4	2,500	0.29	431	0.23	147	0.25	115/60/1	TF	1725	1	5.8

NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL RUN CONDUIT AND CONDUCTORS, 3#12 IN 3/4" CONDUIT TO LOUVERS FROM ASSOCIATED FAN/STAT.
2. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER FROM ALL EXISTING HVAC EQUIPMENT FOR DEMO BY HVAC CONTRACTOR.
3. SEE HVAC DRAWINGS FOR FURTHER HVAC EQUIPMENT INFORMATION.

DATE: 01/22
DRAWN BY: MULLERK
SCALE: AS SHOWN
REVIEWED BY:
PROJECT NO.: 19-1843
FILE: SMPS_PUMP_STATION_HVAC_REV1.DWG

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CIVIL AND ENVIRONMENTAL ENGINEERING
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NO.	DATE	DESCRIPTION
1	11/3/21	BID PLANS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

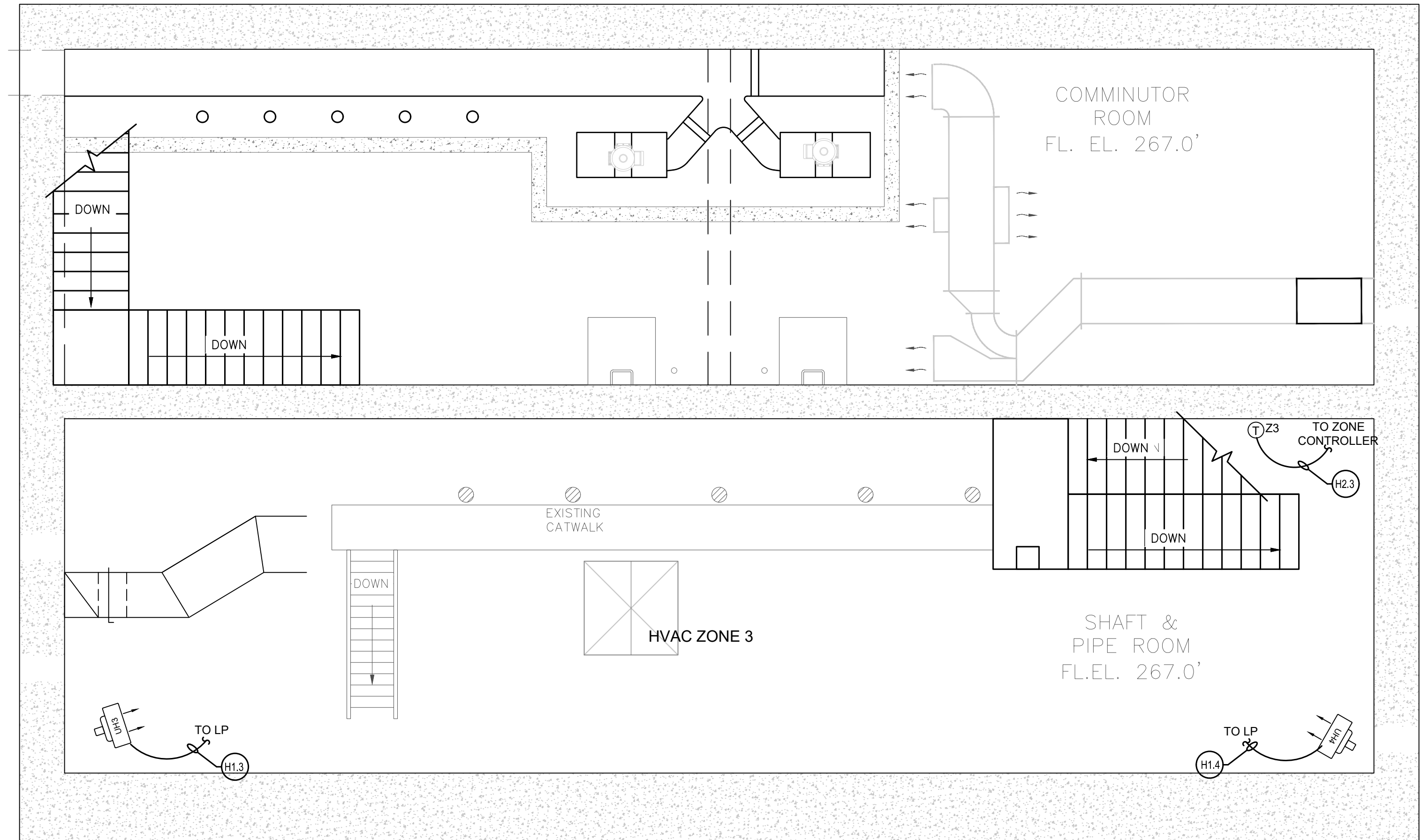
MAIN FLOOR
HVAC ELECTRICAL PLAN

SHEET:

E-114

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SMPS INTERMEDIATE FLOOR HVAC ELECTRICAL PLAN
SCALE: 1/4"=1'

UNIT HEATER SCHEDULE										
ID	LOCATION	MANUFACTURER AND MODEL NUMBER	TYPE	BTU	GPM	EWT (Df)	LWT (Df)	VOLT/PH/HZ	MAX MTG HGHT (FT)	NOTES
UH-1	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-2	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-3	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-4	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-5	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-6	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	

BID PLANS

INTERMEDIATE LEVEL
HVAC ELECTRICAL PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SHEET:

E-115



REVISIONS			DESCRIPTION
NO.	DATE		
1	11/9/21	BD PLANS	

**DELAWARE
ENGINEERING, D.P.C.**

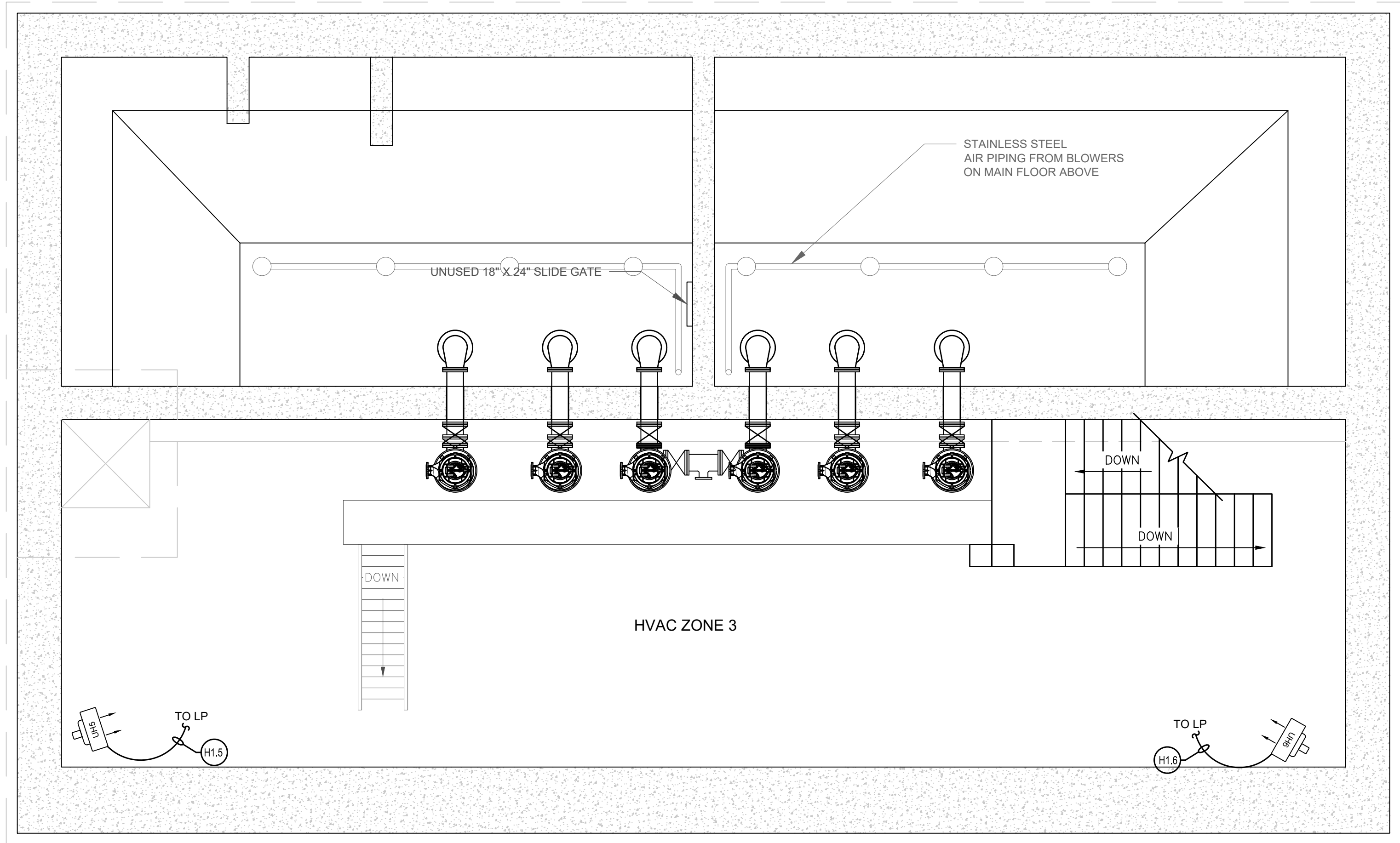
CIVIL AND ENVIRONMENTAL ENGINEERING
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1100 WEST 10TH STREET, ALBANY, NY 12206 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
546 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE: 01/22
DRAWN BY: MULLERK
SCALE: AS SHOWN
REVIEWED BY:
PROJECT NO.: 19-1843
FILE: SMPS_PUMP_STATION_ELEC_HVAC.DWG

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UNIT HEATER SCHEDULE										
ID	LOCATION	MANUFACTURER AND MODEL NUMBER	TYPE	BTU	GPM	EWI (Df)	LWT (Df)	VOLT/PH/HZ	MAX MTG HGT (FT)	NOTES
UH-1	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-2	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13	
UH-3	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-4	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-5	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	
UH-6	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11	



SMPS LOWER FLOOR HVAC ELECTRICAL PLAN
SCALE: 1/4"=1'

BID PLANS

LOWER LEVEL
HVAC ELECTRICAL PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS		
NO.	DATE	DESCRIPTION
1	11/3/21	80 PLANS





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3110 WEST 10TH STREET, ALBANY, NY 12206 - 518.452.1290
16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290
546 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777

DATE:	01/22
DRAWN BY:	MULLERK
SCALE:	AS SHOWN
REVIEWED BY:	
PROJECT NO.:	19-1843
FILE:	SMPS_PUMP_STATION_ELEC_HVAC.DWG

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HYDRONIC BOILER SCHEDULE												
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FUEL TYPE	INPUT CAPACITY (MBH)	NET RATING (MBH)	DOE RATING (MBH)	EFFICIENCY	WORKING FLUID	Design Temps		NOTES
										EWT (Df)	LWT (Df)	
B-1	WEIL MCLAIN EVERGREEN 220	BOILER RM	SS HIGH EFFICIENCY CONDENSING	LP GAS	220	179	206	95%	30% PROPYLENE GLYCOL	180	160	TACO 0014 120/60/1 1, 2

1. PROVIDE WEIL MCLAIN DIRECT VENT KIT
2. PROVIDE WEIL MCLAIN EASY-UP MANIFOLD KIT

HYDRONIC HEATER SCHEDULE															
ID	ROOM NUMBER	LOCATION	ZONE	MODEL	BTU/HR	FLOW RATE (GPM)	WORKING FLUID	DIMENSIONS			PIPE CONN SIZE (IN)	MOUNTING LOCATION	EWT (df)	LWT (df)	NOTES
								LENGTH (FT)	WIDTH (IN)	HEIGHT (IN)					
FTR-1		BATH	1	MODINE S 012	4,450	2	30% PROPYLENE GLYCOL	5	5.25	12	3/4	4" AFF	180	173.3	4.25" X 4.25" FINS @ 34/FT
FTR-2		BOILER ROOM	1	MODINE S 012	4,450	2	30% PROPYLENE GLYCOL	5	5.25	12	3/4	4" AFF	180	173.3	4.25" X 4.25" FINS @ 34/FT
FTR-3		STORAGE RM	1	MODINE S 012	7,120	2	30% PROPYLENE GLYCOL	8	5.25	12	3/4	4" AFF	180	169.3	4.25" X 4.25" FINS @ 34/FT

NOTE: PROVIDE ALL REQUIRED CONNECTIONS, ENCLOSURE EXTENSIONS, END CAPS, ETC TO PROVIDE A COMPLETE INSTALLATION.

VRF HEAT PUMP SYSTEM							
ID	MANUFACTURER	LOCATION	MODEL NUMBER	COOLING/HEATING CAPACITY (BTU/HR)	VOLT/PH/HZ	REFRIGERANT	
HP-1	DAIKIN	OUTDOOR	MXZ-3C24NAHZ2-U1	22,000/25,000	208-230/1/60	R410A	
HP-2	MITSUBISHI	OFFICE	MSZ-FH12NA-U1	12,000/12,300	208-230/1/60	R410A	1
HP-3	MITSUBISHI	ELECTRIC ROOM	MSZ-FH12NA-U1	12,000/12,300	208-230/1/60	R410A	1

HYPER-HEAT
NOTE 1: PROVIDE PAC-YT53CRAU-J CONTROLLER

Belt Drive Upblast Centrifugal Wall Exhaust Fan

MARK INFORMATION			FAN INFORMATION					MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF1 - PUMP RM	CUBE-240-7	4,000	0.5	619	0.66	136	0.75	460/60/3	TF	1725	1	1.6

*NEC FLA - Based on table [430.250](#) or [430.248](#) of National Electrical Code 2017. Actual motor FLA may vary for sizing thermal overload, consult factory"

EF1 - PUMP RM : SELECTED OPTIONS AND ACCESSORIES
Standard Curb Cap Size - 34 in. Square Sidewall Mounting - Fan Configured for Wall-Mounted Applications Spark B Construction UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-1, Toggle, Shipped with Unit Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc Hood Hasps Stainless Steel Shaft - 300 Series Wall Grille, Shipped Loose (PN 916480) Birdscreen: Aluminum, nom. 86% Free Area Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs) Aluminum Rub Ring

Belt Drive Upblast Centrifugal Roof Exhaust Fan

MARK INFORMATION		FAN INFORMATION					MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF2 - INFLUENT	CUBE-200-15	3,500	1	992	1.18	212	1.5	460/60/3	EX	1725	1	3

*NEC FLA - Based on table [430.250](#) or [430.248](#) of National Electrical Code 2017. Actual motor FLA may vary for sizing thermal overload, consult factory"

EF2 - INFLUENT : SELECTED OPTIONS AND ACCESSORIES
Standard Curb Cap Size - 30 in. Square Spark B Construction UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-7 and 9, Toggle, Shipped with Unit, Division1 Wiring Foam Curb Seal (Attached) Adapter-Alum., Curb Cap Adapted to 32 x 32 (Attached), Coated Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc Non-Stick Coated Wheel (Teflon) Hood Hasps Stainless Steel Shaft - 300 Series Birdscreen: Aluminum, nom. 86% Free Area Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs) Aluminum Rub Ring

PUMP SCHEDULE									
ID	ZONE	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FLUID FLOW RATE (GPM)	ELECTRICAL			
						HEAD IN FT	CONSTRUCTION	MOTOR SIZE (HP)	MOTOR SPEED (RPM)
P-1	1	TACO 009-IFC	MECHANICAL	CIRCULATOR	2	14	IRON	1/8	3450
P-2	2	TACO 011-IFC	MECHANICAL	CIRCULATOR	6	18	IRON	1/8	3250
P-3	3	TACO 2445	MECHANICAL	CIRCULATOR	8	35	IRON	1/3	3450

PROVIDE BALL VALVES, CHECK VALVES, FLANGES AND OTHER APPURTENANCES TO MAKE A COMPLETE SYSTEM

UNIT HEATER SCHEDULE											
ID	LOCATION	MANUFACTURER AND MODEL NUMBER	TYPE	BTU	GPM	EWT (Df)	LWT (Df)	VOLT/PH/HZ	MAX MTG HGT (FT)	NOTES	
UH-1	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13		
UH-2	1ST FLOOR	MODINE HC 47	HORIZONTAL	30,900	3.2	180	159.9	115/60/1	13		
UH-3	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11		
UH-4	MID LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11		
UH-5	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11		
UH-6	LOWER LEVEL	MODINE HC 33	HORIZONTAL	21,700	2.3	180	160.3	115/60/1	11		

LOUVER SCHEDULE											
ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	CFM	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	NOTES			
LV-1	GREENHECK ECD-601	MAIN FLOOR	STATIONARY EXTRUDED, DRAINABLE BLADE	1250	24	24	6	1			
LV-2	GREENHECK ECD-601	MAIN FLOOR	STATIONARY EXTRUDED, DRAINABLE BLADE	1250	24	24	6	1			

NOTES:
1. PROVIDE WALL SLEEVE, CHANNEL FRAME, BAKED ENAMEL FINISH (COLOR TBD), BIRDSCREEN, 120V ACTUATOR

Belt Drive Upblast Centrifugal Wall Exhaust Fan

MARK INFORMATION		FAN INFORMATION					MOTOR INFORMATION						
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF3	CUBE-240-4	2,500	0.29	431	0.23	147	0.25	115/60/1	TF	1725	1	5.8

*NEC FLA - Based on table [430.250](#) or [430.248](#) of National Electrical Code 2017. Actual motor FLA may vary for sizing thermal overload, consult factory"

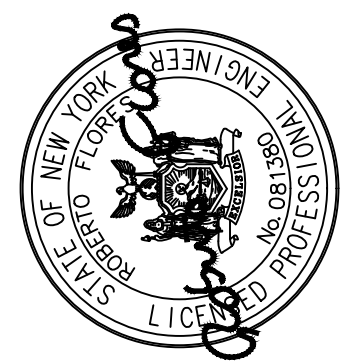
EF3 : SELECTED OPTIONS AND ACCESSORIES
Standard Curb Cap Size - 34 in. Square Sidewall Mounting - Fan Configured for Wall-Mounted Applications UL/cUL 705 Listed - "Power Ventilators" Switch, NEMA-1, Toggle, Shipped with Unit Damper Shipped Loose, WD-330-PB-24X24, Gravity Operated, Not Coated Coated with Permatector, Concrete Gray-RAL 7023, Fan And Attached Acc Hood Hasps Stainless Steel Fasteners - 300 Series Stainless Steel Shaft - 300 Series Wiring Pigtail, Internal, General, 9 ft from Unit of Flexible Metal Conduit Birdscreen: Aluminum, nom. 86% Free Area Bearings with Grease Fittings, L10 life of 100,000 hrs (L50 avg. life 500,000 hrs)

DATE: 01/22
DRAWN BY: MULLERK
SCALE: AS SHOWN
REVIEWED BY:
PROJECT NO.: 19-1843
FILE: SHPS_PUMP_STATION_HVAC REV1.DWG

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SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

HVAC SCHEDULES

SHEET:
H1

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DIAGRAM	SYMBOL	LEGEND
DISPLAY	DESCRIPTION	
---	///	POWER WIRE
---	---	CONTROL WIRE
---	---	REF. PIPE

CONT.No		PAGE	
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PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	MAC-A455JP-E
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4" / 3/8"
SYMBOL	MODEL NUMBER
CR	PAC-YT33CRAU-J
WAWR	stack controller

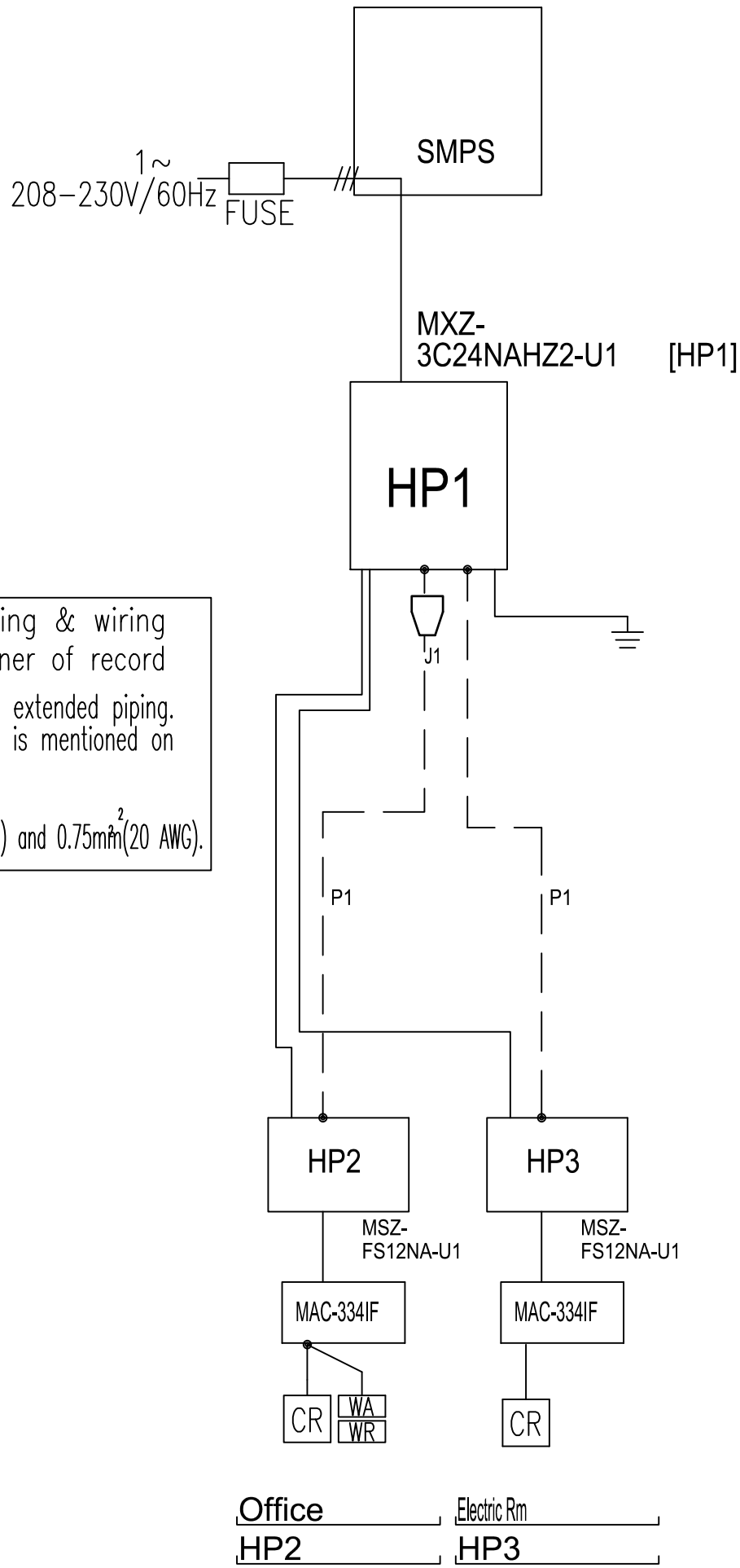
This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record. Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

Coded Notes:

NOTE 1: Install twinning Y's within 15 degrees of level and with 20 inches of straight pipe on converging connection - reference installation manual for additional details including but not limited to special trapping requirements when twinning, and pipe slope requirements

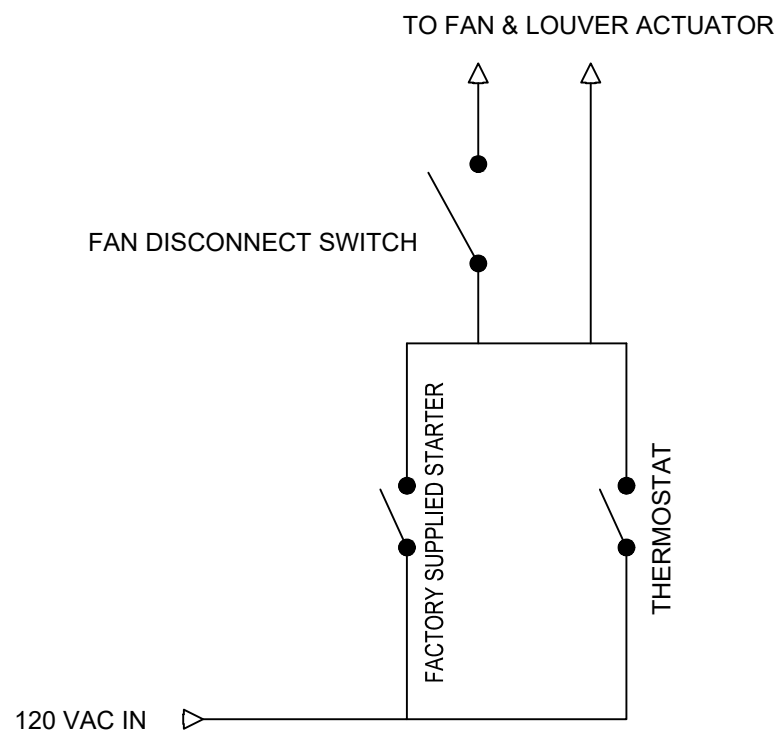
REMARKS
Comments:



Office _____ Electric Rm _____
HP2 _____ HP3 _____

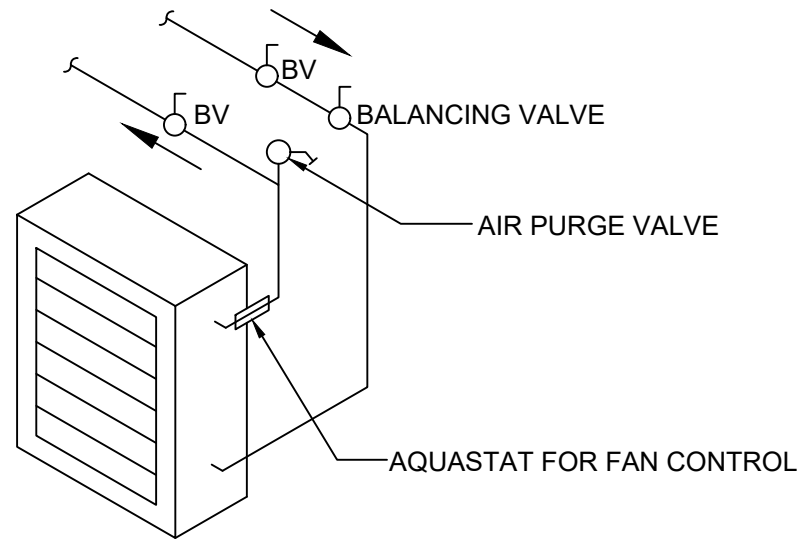
HEAT PUMP SYSTEM SCHEMATIC

NTS



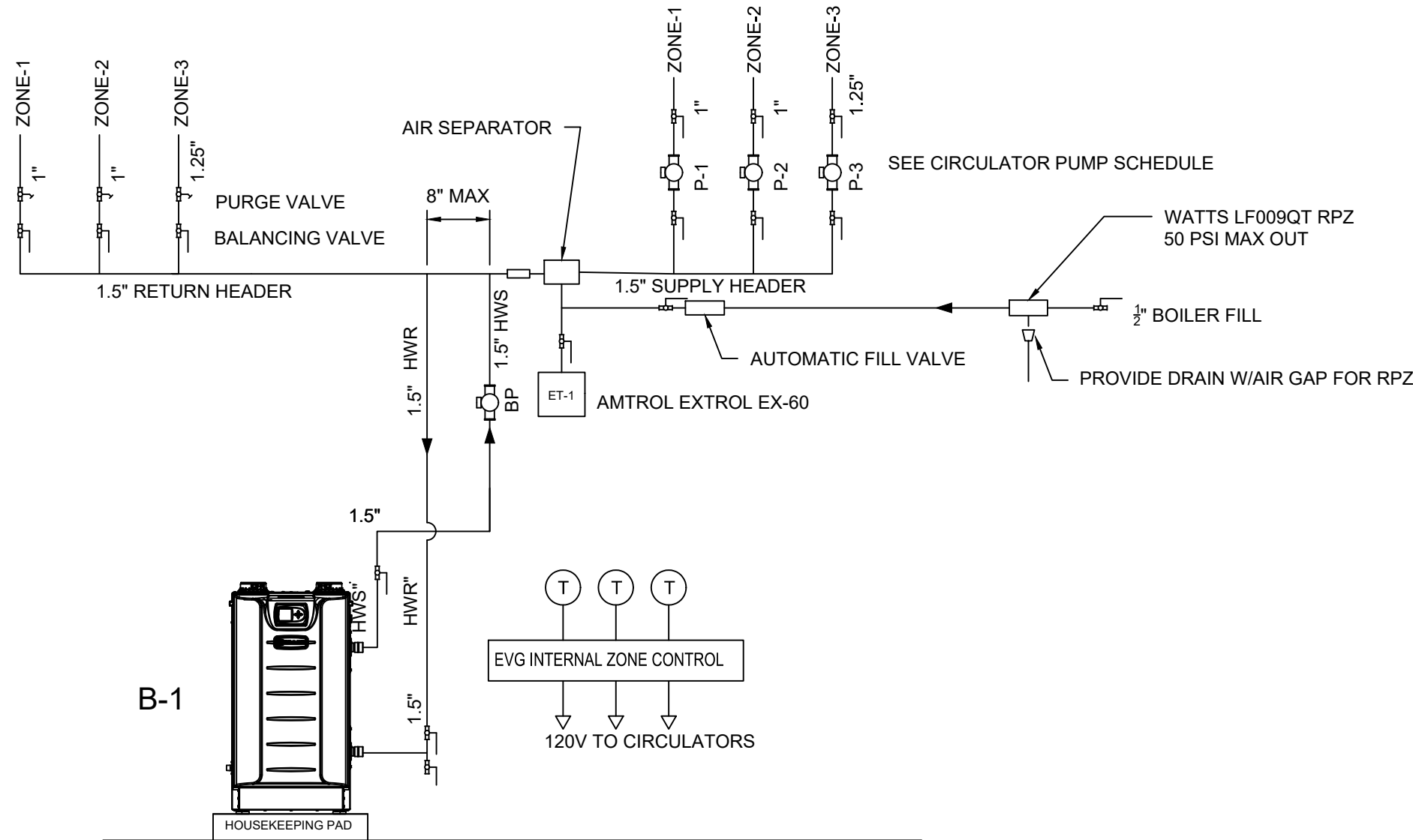
TYPICAL EXHAUST FAN CONTROL

NTS



NOTES:

- EXHAUST FANS AND LOUVERS SHALL BE GREENHECK OR APPROVED EQUAL.
- HYDRONIC HEATERS SHALL BE MODINE.
- EF3 SHALL HAVE A HONEYWELL T6051A1016/U COOLING THERMOSTAT AS SHOWN. GREENHECK MOTOR STARTER SHALL PROVIDE MANUAL OPERATION.
- ALL HYDRONIC HEAT ZONES SHALL HAVE HONEYWELL TH8110U1003 PROGRAMMABLE THERMOSTATS. AQUASTATS SHALL PROVIDE FAN CONTROL.
- EF1 AND EF2 SHALL OPERATE ON A PROGRAMMABLE TIMER AND A MANUAL COUNTDOWN TIMER. CONTROLS FOR EF2 BE MUST EXPLOSION PROOF (NEMA 7) UNLESS LOCATED OUTSIDE THE SPACE.
- ALL HWS AND HWR PIPING SHALL INSULATED TYPE L COPPER.



BOILER SCHEMATIC

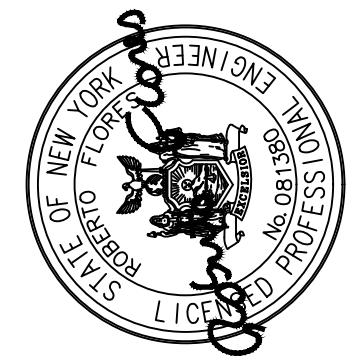
NTS

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548 BROADWAY, MONTICELLO, NY 12701 - 845-791-7777



REVISIONS

NO.	DATE	DESCRIPTION

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

BID PLANS

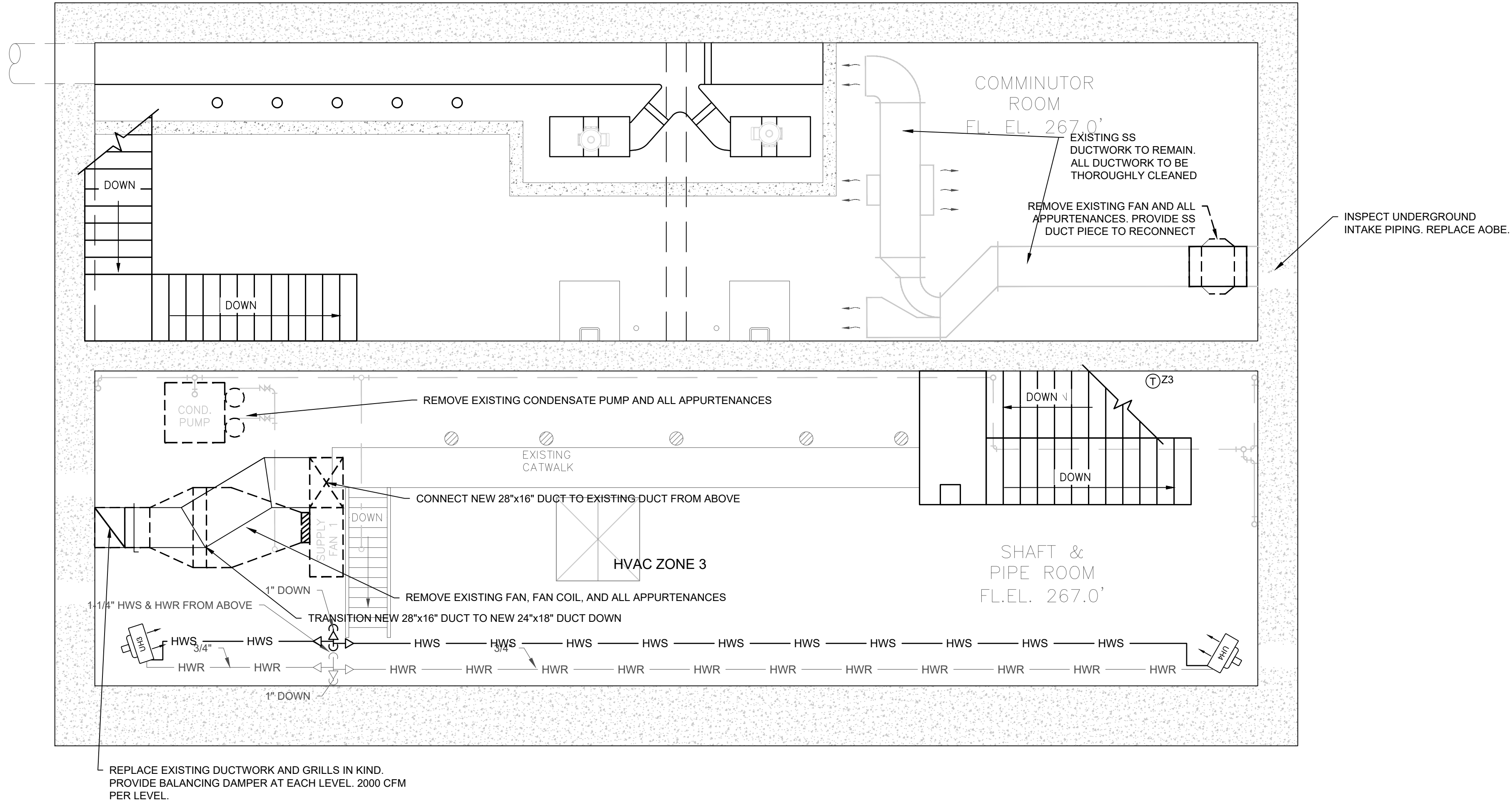
HVAC DETAILS

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H2

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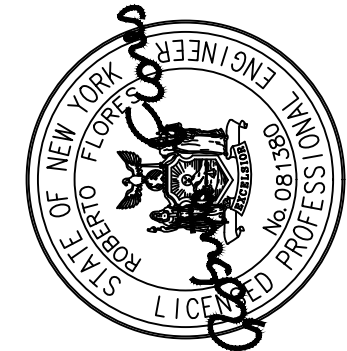


BID PLANS

INTERMEDIATE LEVEL
HVAC PLAN

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DESCRIPTION



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CIVIL AND ENVIRONMENTAL ENGINEERING

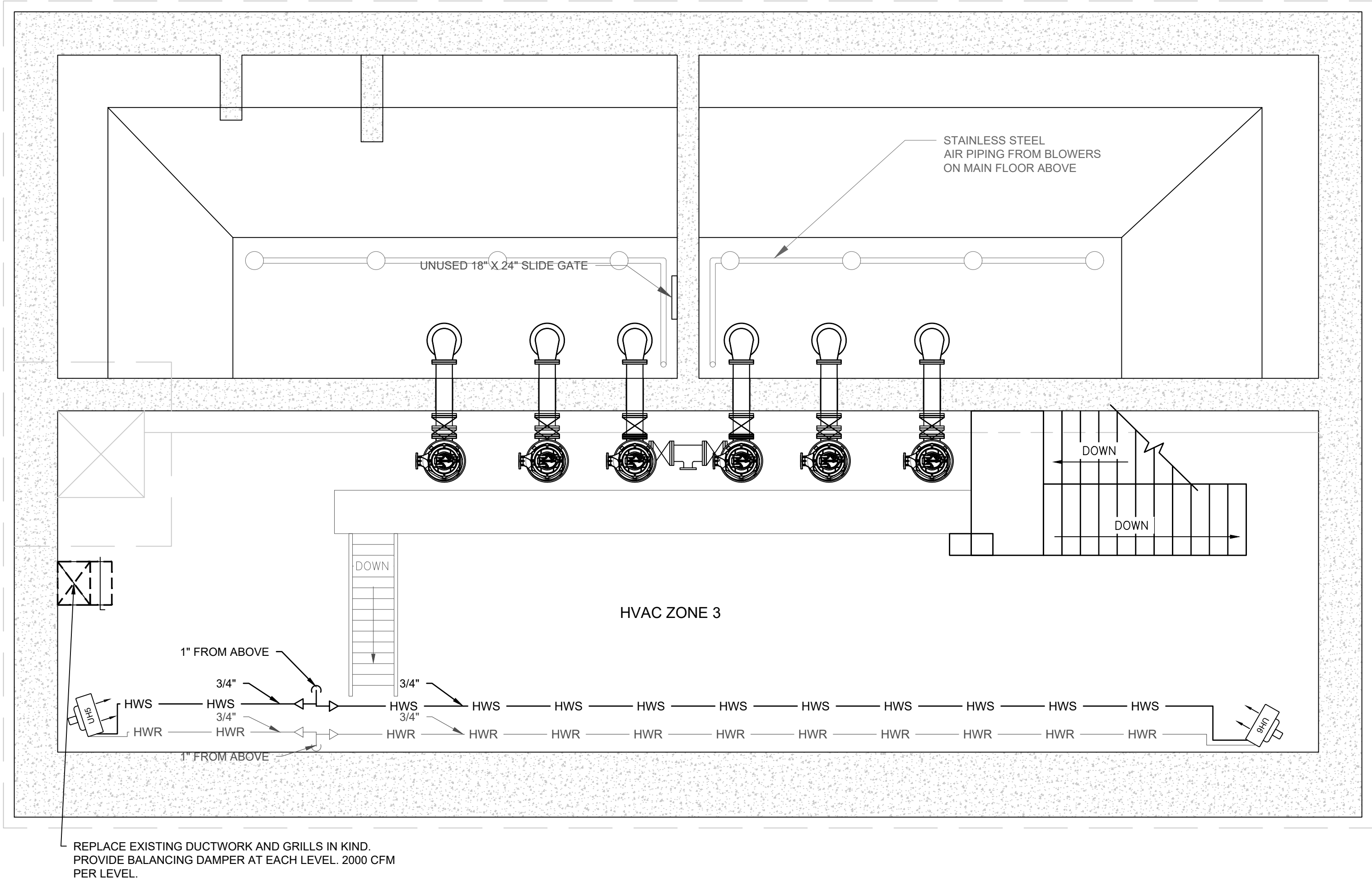
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SHEET:
H11

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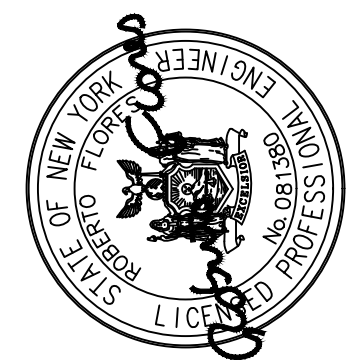
BID PLANS

SHEET:

H12

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

REVISIONS	
NO.	DATE DESCRIPTION



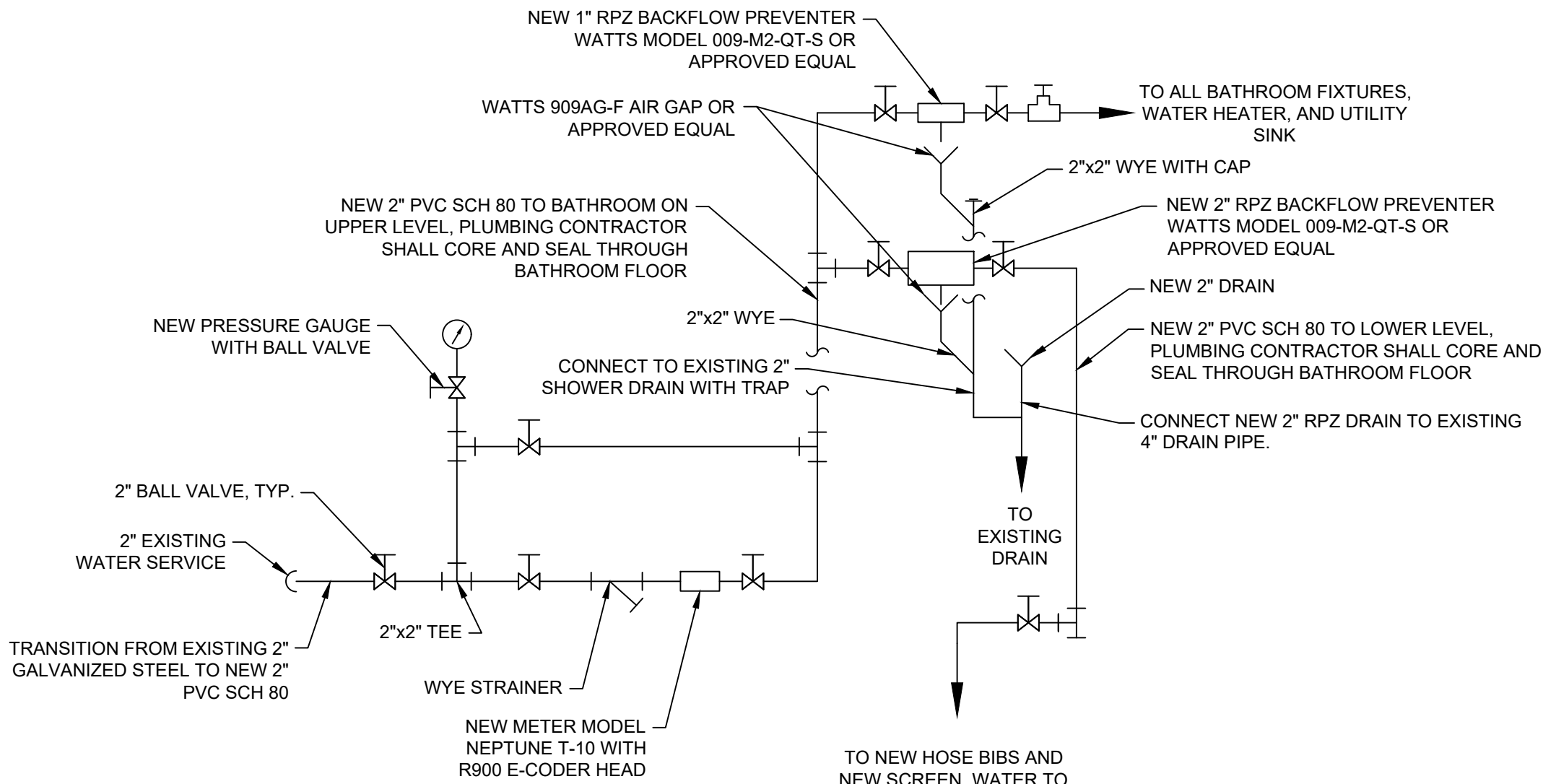


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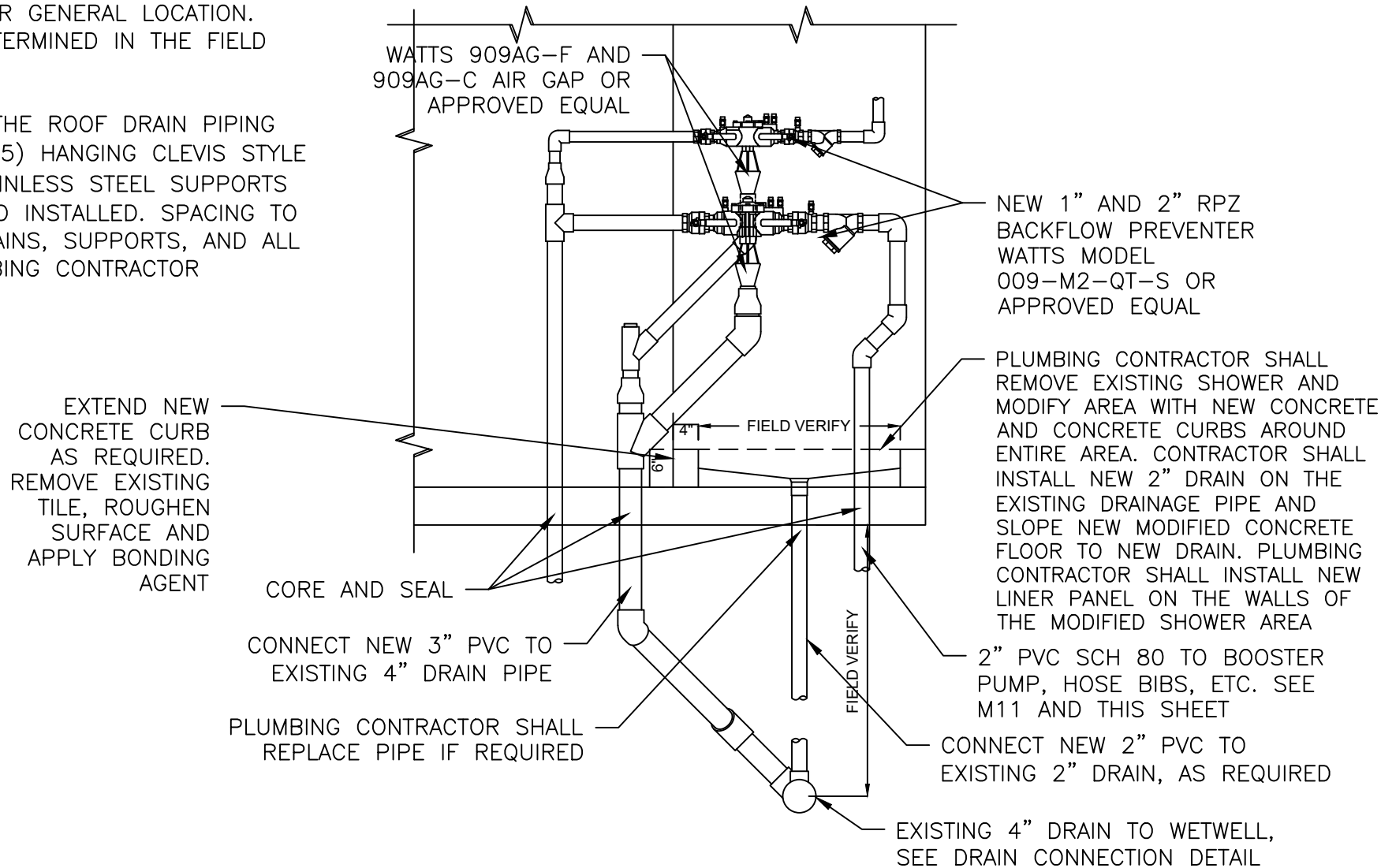


HOSE BIB SCHEDULE:
(2) - 1/4" FROST FREE HOSE BIB, BUILDING EXTERIOR
(2) - 1/4" HOSE BIB, WET WELL AREA
(6) - 3/4" HOSE BIB, CONTROL ROOM, DRY WELL, AND WET WELL

WATER SYSTEM SCHEMATIC

SCALE: N.T.S.

- NOTES:**
- PLUMBING CONTRACTOR SHALL REMOVE EXISTING WATER SYSTEM AND FURNISH AND INSTALL ALL NEW WATER PIPING, FITTINGS, VALVES, RPZS, PRESSURE GAGES, PRESSURE REGULATORS, AIR GAPS, DRAINS, HOSE BIBS, WATER METER, FLOW METERS, SUPPORTS, AND ALL APPURTENANCES. GENERAL CONTRACTOR SHALL PROVIDE NEW PRESSURE TRANSDUCERS FOR SEAL WATER SYSTEM. PLUMBING CONTRACTOR SHALL INSTALL PRESSURE TRANSDUCER ON THE SEAL WATER SYSTEM AS SHOWN ON THE WATER SYSTEM SCHEMATIC ON THIS SHEET.
 - PLUMBING CONTRACTOR SHALL REMOVE EXISTING SHOWER AND MODIFY AREA WITH NEW CONCRETE AND CONCRETE CURBS AROUND ENTIRE AREA. CONTRACTOR SHALL INSTALL NEW 2" DRAIN ON THE EXISTING DRAINAGE PIPE AND SLOPE NEW MODIFIED CONCRETE FLOOR TO NEW DRAIN. PLUMBING CONTRACTOR SHALL INSTALL NEW LINER PANEL ON THE WALLS OF THE MODIFIED SHOWER AREA.
 - ALL NEW WATER PIPING SHALL BE PVC SCH 80, UNLESS OTHERWISE NOTED.
 - ALL PIPING IN THE BATHROOM SHALL BE COPPER TYPE L. PLUMBING CONTRACTOR SHALL TRANSITION TO COPPER AFTER 1" RPZ TO BATHROOM FIXTURES.
 - ALL VALVES SHALL BE TRUE UNION.
 - ALL RPZ BACKFLOW PREVENTERS SHALL BE INSTALLED IN THE BATHROOM. PLUMBING CONTRACTOR SHALL CORE THROUGH THE EXISTING CONCRETE AND SEAL.
 - PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL TWO HOSE REELS MANUFACTURED BY HANNAY REELS MODEL N800. SEE M12 FOR GENERAL LOCATION. FINAL LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - ALL PIPE SUPPORTS FOR THE ROOF DRAIN PIPING ARE TO BE REPLACED. (15) HANGING CLEVIS STYLE AND (5) CLAMP STYLE STAINLESS STEEL SUPPORTS ARE TO BE FURNISHED AND INSTALLED. SPACING TO MATCH EXISTING. ROOF DRAINS, SUPPORTS, AND ALL APPURTENANCES BY PLUMBING CONTRACTOR

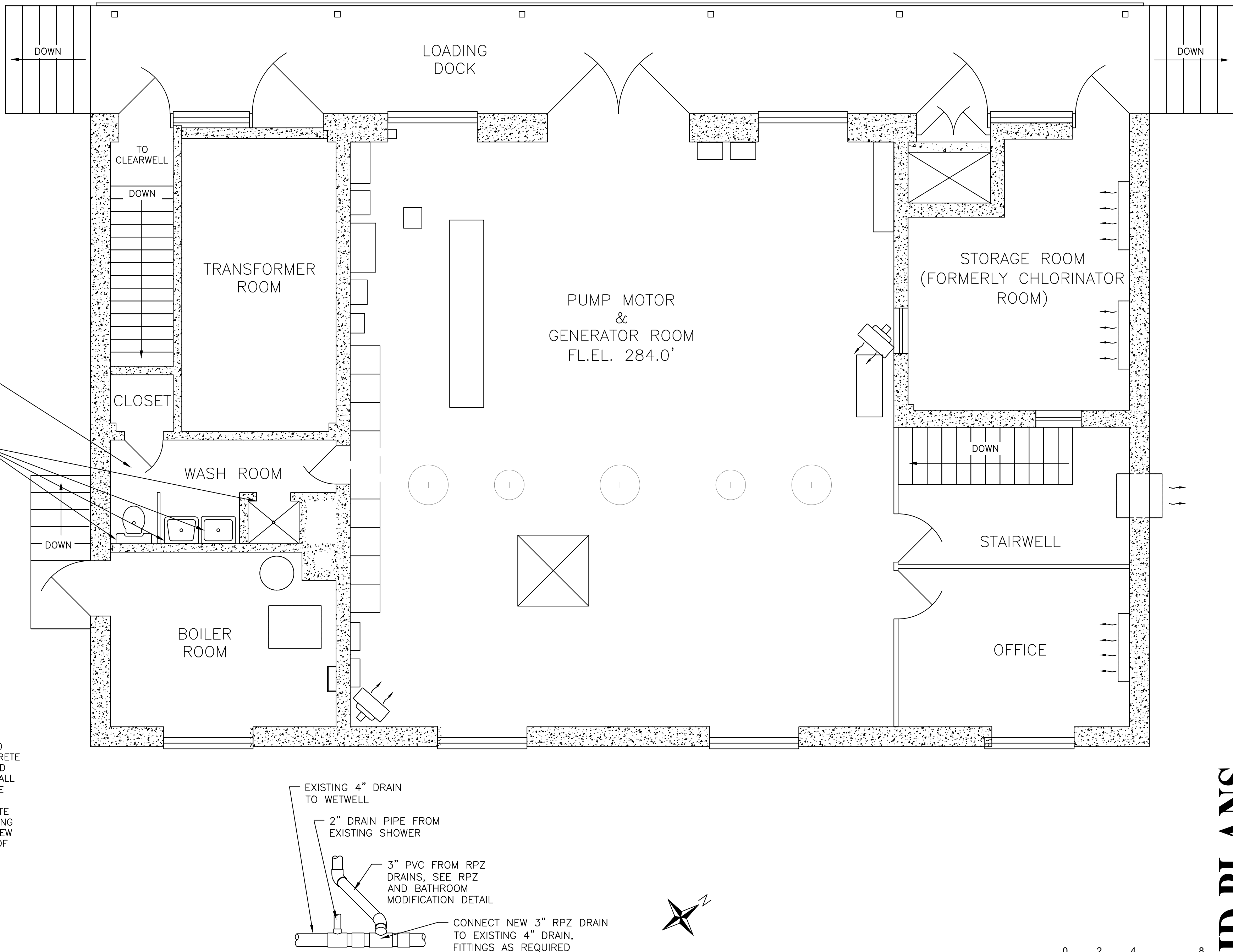


RPZ AND BATHROOM MODIFICATION DETAIL

SCALE: 1/2"=1'

PLUMBING FIXTURE NOTES:

- FURNISH AND INSTALL AMERICAN STANDARD MADERA FLOWISE 16-1/2" HGT FLOOR MOUNT. PROVIDE SEAT, MANUAL FLUSH VALVE AND ALL APPURTENANCES TO MAKE A COMPLETE UNIT.
- FURNISH AND INSTALL AMERICAN STANDARD LUCERNE WALL MOUNT W/AMERICAN STANDARD HERITAGE GOOSENECK FAUCET, WRIST BLADE HANDLES, AND ALL APPURTENANCES TO MAKE A COMPLETE UNIT.
- FURNISH ALL WASHROOM ACCESSORIES:
(1) BRADLEY MODEL 505 TOILET PAPER HOLDERS
(1) BRADLEY MODEL 2441-11 SURFACE MOUNT TOWEL DISPENSER
(1) BRADLEY MODEL 7805 MIRROR AND SHELF UNIT
- FURNISH AND INSTALL ELECTRIC WATER HEATER RHEEM 120 GAL MODEL PROE120-2-RH85 OR APPROVED EQUAL.



DRAIN CONNECTION DETAIL

SCALE: 1/2"=1'

NOTES:

- GENERAL CONTRACTOR SHALL FURNISH AND INSTALL 4" DRAIN IN THE ELEVATED SLAB WITH 3" PVC SCH 80 PIPE STUB AND 3" PVC SCH 80 PIPE STUB FROM WASHER/COMPACTOR PER ALTERNATE #1. COORDINATE LOCATION WITH PLUMBING CONTRACTOR.
- PLUMBING CONTRACTOR SHALL EXTEND THE NEW WATER PIPING IN THE WET WELL AREA TO THE NEW HOSE BIBS AND WASHER/COMPACTOR.
- PLUMBING CONTRACTOR SHALL CONNECT PIPE STUBS FROM GENERAL CONTRACTOR FROM WASHER/COMPACTOR AND THE DRAIN PER ALTERNATE #1.
- PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL 3" PVC SCH 80 DRAINAGE PIPING FROM GENERAL CONTRACTORS PIPE STUBS TO CHANNEL. THIS INCLUDES CONNECTION FROM GC PIPE STUBS FROM DRAINS, ALL PIPES, ALL FITTINGS, ALL SS SUPPORTS, CUTTING AND SEALING OF FRP GRATING, AND ALL APPURTENANCES.
- PLUMBING CONTRACTOR SHALL RELOCATE EXISTING ROOF DRAINS IN CONFLICT WITH THE NEW MECHANICAL BAR SCREEN PER ALTERNATE #1

NOTES:

- NEW WATER PIPING SHALL BE INSTALLED TO SUPPLY ALL NEW FIXTURES AS SHOWN ON THESE PLANS.
- ALL FIXTURES IN THE LAVATORY SHALL BE REPLACED.
- ALL PIPE HANGERS AND SUPPORTS SHALL BE DESIGNED AND ARRANGED BY THE CONTRACTOR IN ACCORDANCE WITH BEST PRACTICE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL MATERIAL AND EQUIPMENT INDICATED AS REMOVED SHALL BE DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.
- SEE M11 AND M13 FOR SEAL WATER, WATER TO WETWELL AREA, DRAINAGE PIPING.
- PLUMBING CONTRACTOR SHALL REMOVE ALL EXISTING SEAL WATER AND REPLACE WITH NEW SEAL WATER SYSTEM. EXISTING SEAL WATER SYSTEM TO REMAIN OPERATIONAL TO UNTIL NEW SYSTEM HAS BEEN INSTALLED. GENERAL CONTRACTOR AND PLUMBING CONTRACTOR SHALL COORDINATE WITH EACH OTHER.
- WETWELL AREA, LOWER LEVEL PUMP AREA, AND INTERMEDIATE PIPING AREA ARE TOWN DESIGNATED CONFINED SPACES. CONTRACTOR SHALL DEVELOP A CONFINED SPACE PLAN FOR WORK IN THOSE AREAS.

REVISIONS		DESCRIPTION
NO.	DATE	

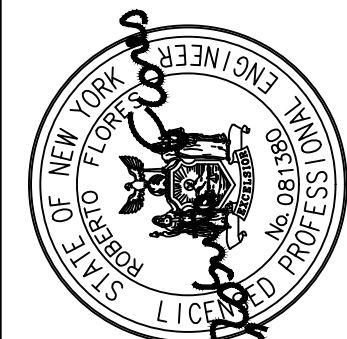
SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

SMPS NEW
PLUMBING PLAN

SHEET:

P-101

**DELAWARE
ENGINEERING, D.P.C.**
CIVIL AND ENVIRONMENTAL ENGINEERING



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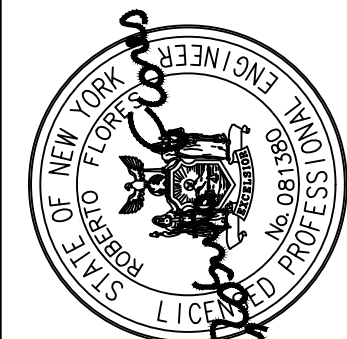
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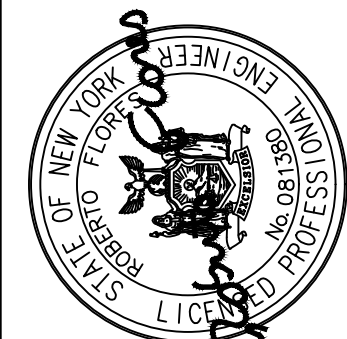
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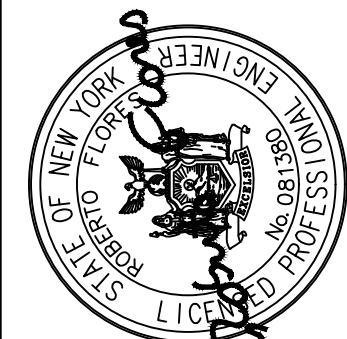
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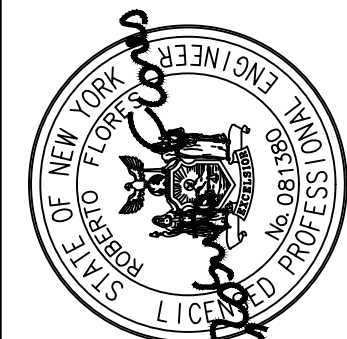
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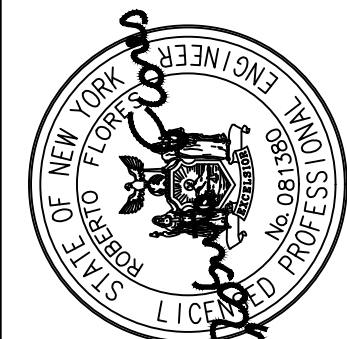
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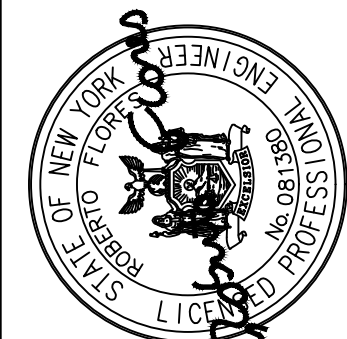
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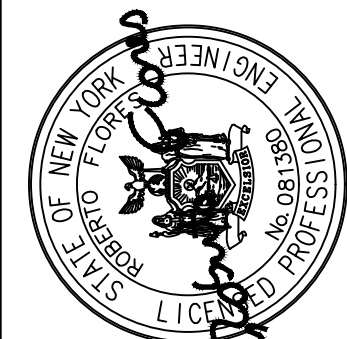
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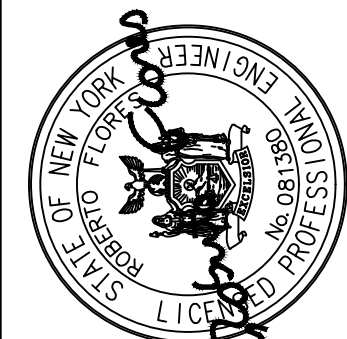
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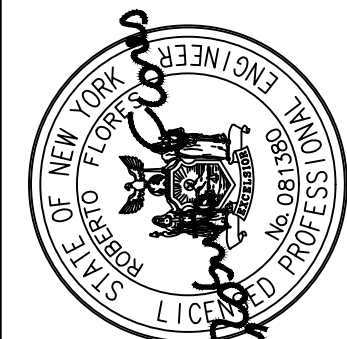
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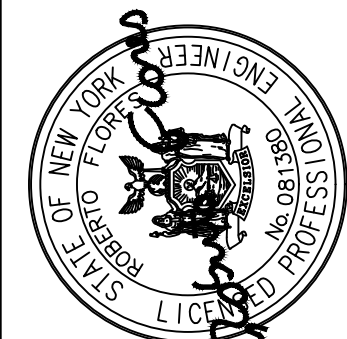
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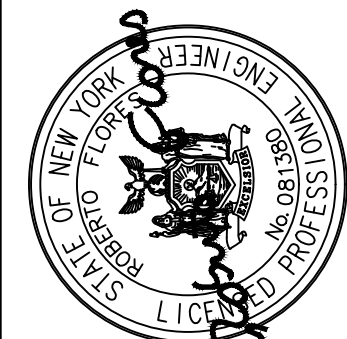
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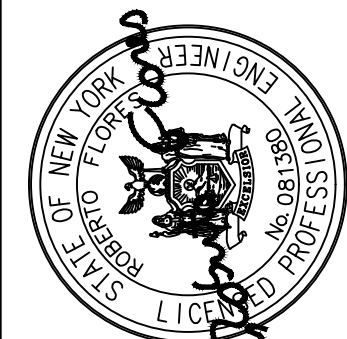
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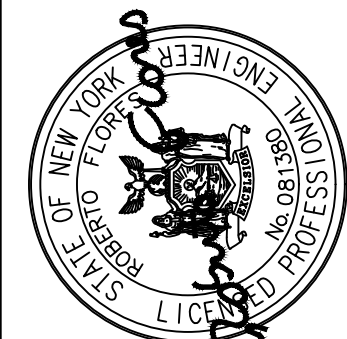
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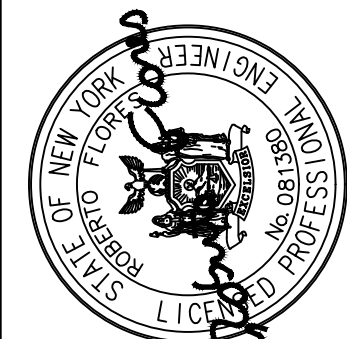
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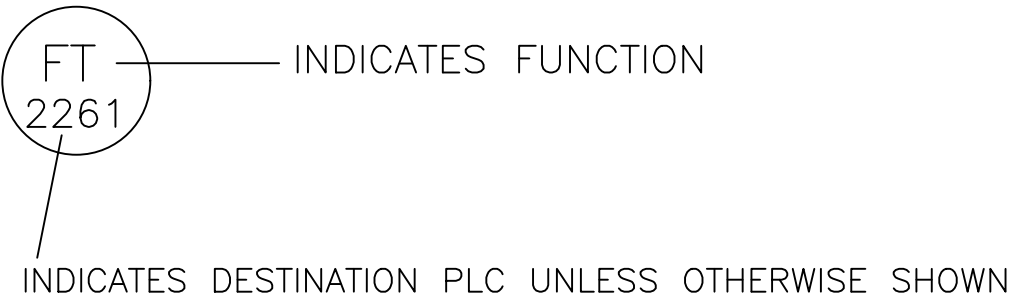
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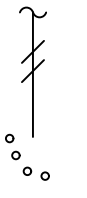
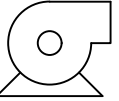
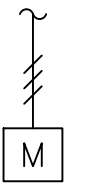
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LEGEND

- NPW(HP) NON-POTABLE WATER
HIGH PRESSURE
- NPW(LP) NON-POTABLE WATER
LOW PRESSURE
- WAS WASTE ACTIVATED SLUDGE
- RAS RETURN ACTIVATED SLUDGE

SYMBOL DESIGNATION NUMBERS



P&ID SYMBOLS		
 BUBBLER	 FLOW CONTROL VALVE	 PUMP
 MAGNETIC FLOW METER	 PLUG VALVE	 DISCRETE INPUT
 PRESSURE TRANSDUCER	 BALL VALVE	 DISCRETE OUTPUT
 LEVEL FLOAT	 CHECK VALVE	 ANALOG INPUT
	 THREE WAY VALVE	 ANALOG OUTPUT

NOTES

- 1) FURNISH AND INSTALL INTERNALLY MOUNTED SURGE PROTECTION IN ALL CONTROL PANELS. SEE SPECIFICATIONS SECTION 11750.

P&ID FUNCTION IDENTITY					
LETTER	FIRST LETTER		SUCCEEDING LETTER		
	MEASURED OR INITIATING VARIABLE	MODIFIER (TO FIRST LETTER)	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER (TO OUTPUT FUNCTION)
A	ANALYSIS		ALARM	ALARM	
B	BURNER, COMBUSTION				
C		CONTROL		CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR (ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)		FAILURE	
G	GENERAL		GLASS		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL				LOW
M	MOISTURE, HUMIDITY	MOMENTARY			MIDDLE, INTERMEDIATE
N					
O	OPTICAL		ORIFICE, RESTRICTION		OPENED
P	PRESSURE, VACUUM		POINT (TEST) CONNECT		
Q	QUANTITY, EVENT	INTEGRATE, TOTALIZE			
R	RUN	RELIEF, REDUCING	RECORD		RUN, START, ON
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY, VIBRATION	VACUUM		VALVE, DAMPER, LOUVER	
W	WEIGHT		WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	
Y		Y-AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z-AXIS		DRIVER, ACTUATOR UNCLASSIFIED FINAL CONTROL ELEMENT	

ACP	AIR CONTROL PANEL
CHL	CHLORINE ANALYZER
CP	EQUIPMENT CONTROL PANEL
GAI	BUILDING INTRUSION ALARM
GF	GENERAL FAULT
GRI	START
GRO	RUN STATUS
HOA	HAND-OFF-AUTOMATIC SWITCH
M	MAGNETIC FLOW METER
MV	MOTORIZED VALVE
PC	PARTICLE COUNTER
PH	PH ANALYZER
PT	PRESSURE TRANSDUCER
PV	PNEUMATIC VALVE
SI	SPEED IN
SO	SPEED OUT
TBM	TURBIDIMETER
THM	THERMAL SENSOR
ULS	ULTRASONIC LEVEL TRANSDUCER
UV	ULTRAVIOLET DISINFECTION

CONVENTIONAL P&ID DRAWING SYMBOLS			
	FRONT OF PANEL NORMALLY ACCESSIBLE TO OPERATOR	REAR OF PANEL NORMALLY INACCESSIBLE TO OPERATOR	FIELD MOUNTED
DISCRETE INSTRUMENTS			
DISTRIBUTED CONTROL/SHARED DISPLAY			
COMPUTER FUNCTION			
PROGRAMMABLE LOGIC CONTROLLER			

DATE:	01/22
DRAWN BY:	AFA
SCALE:	AS SHOWN
REVIEWED BY:	
PROJECT NO.:	19-1843
FILE:	P&IDREV1.DWG

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311 NORTH MAIN STREET, LIBERTY, NY 12544 - 518.452.1290

16 EAST MARKET ST., RED HOOK, NY 12571 - 518.452.1290

548 BROADWAY, MONTICELLO, NY 12701 - 845.791.7777



REVISIONS		
NO.	DATE	DESCRIPTION
1	11.3.21	BID PLANS

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

P&ID
LEGEND

SHEET:

11

BID PLANS

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3. THE GENERAL CONTRACTOR WILL FURNISH AND INSTALL LIGHTNING AND SURGE PROTECTION IN ALL CONTROL PANELS.

BID PLANS

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INSTRUMENTATION

SAW MILL PUMP STATION
UPGRADES
VILLAGE OF MOUNT KISCO
WESTCHESTER COUNTY, NY

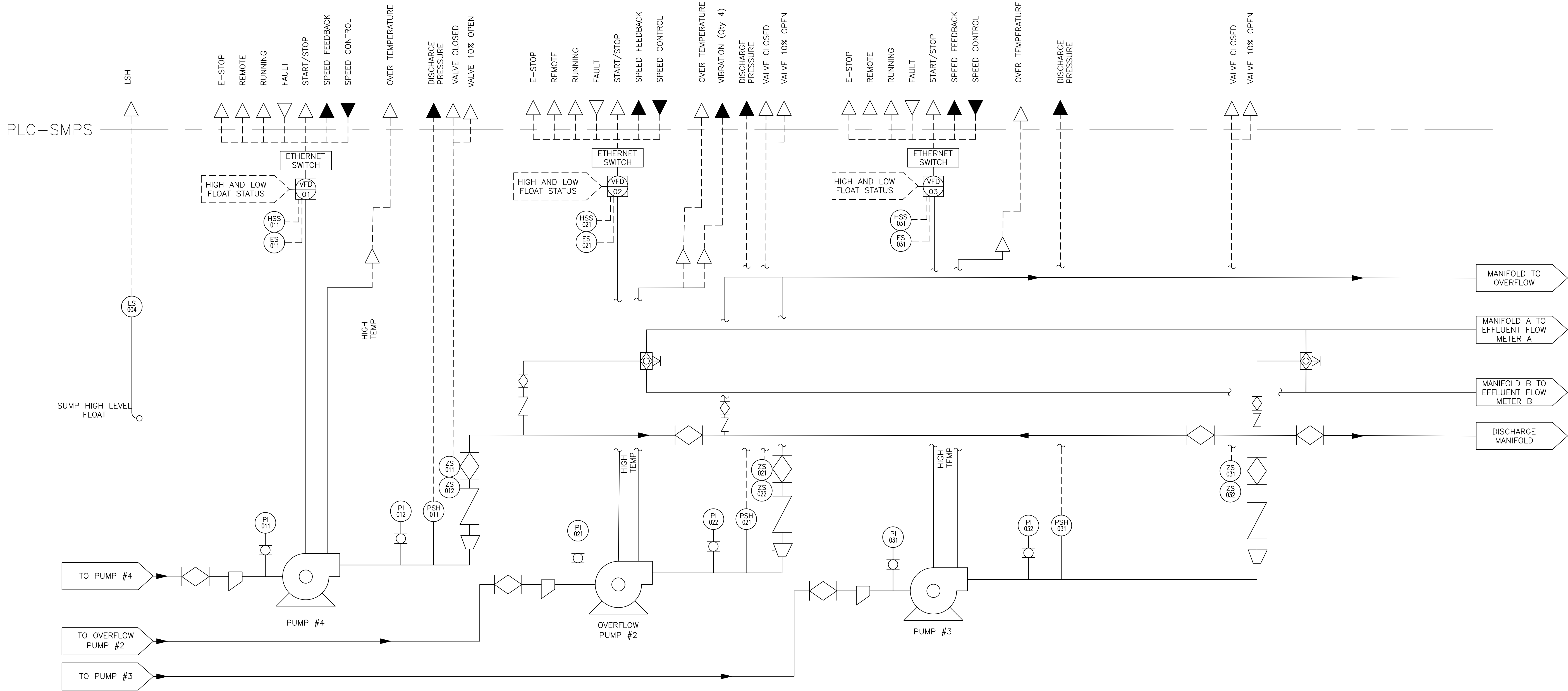
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INSTRUMENTATION

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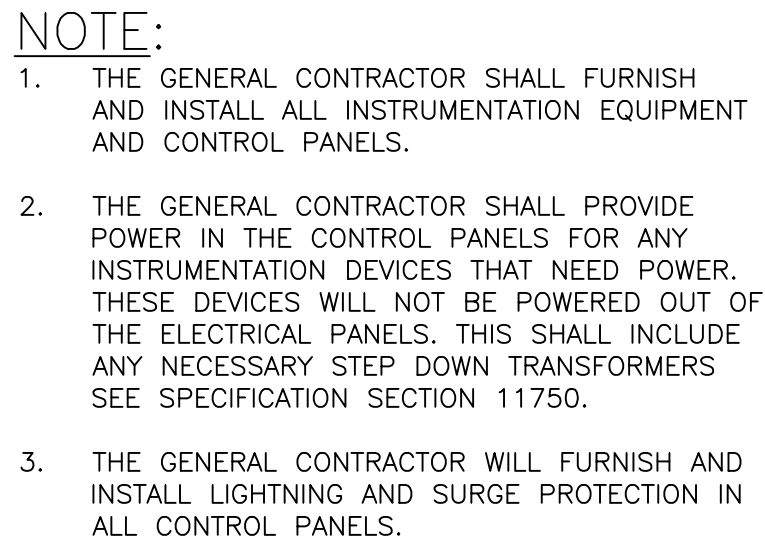


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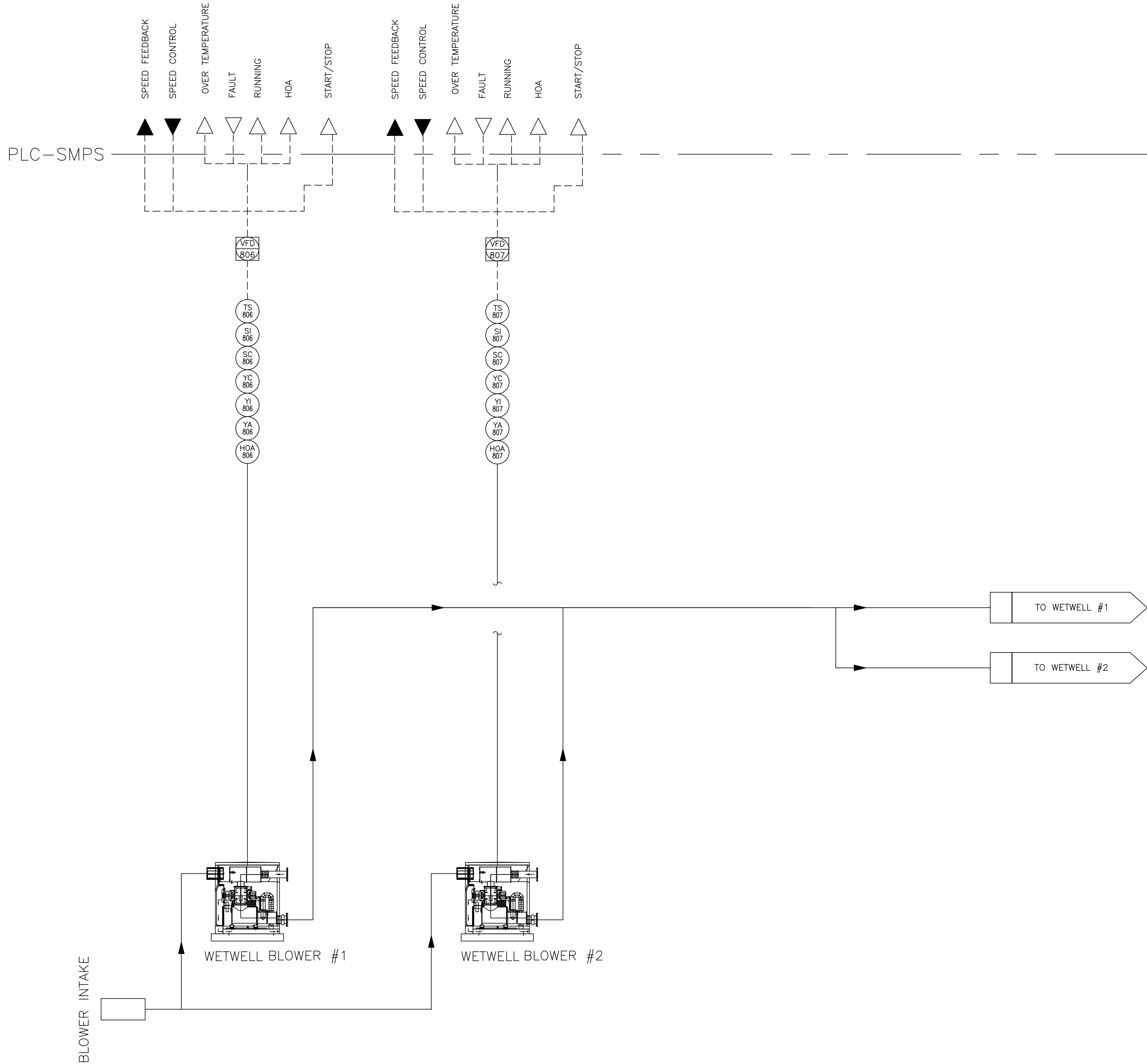


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BID PLANS

SHEET:

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INSTRUMENTATION

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