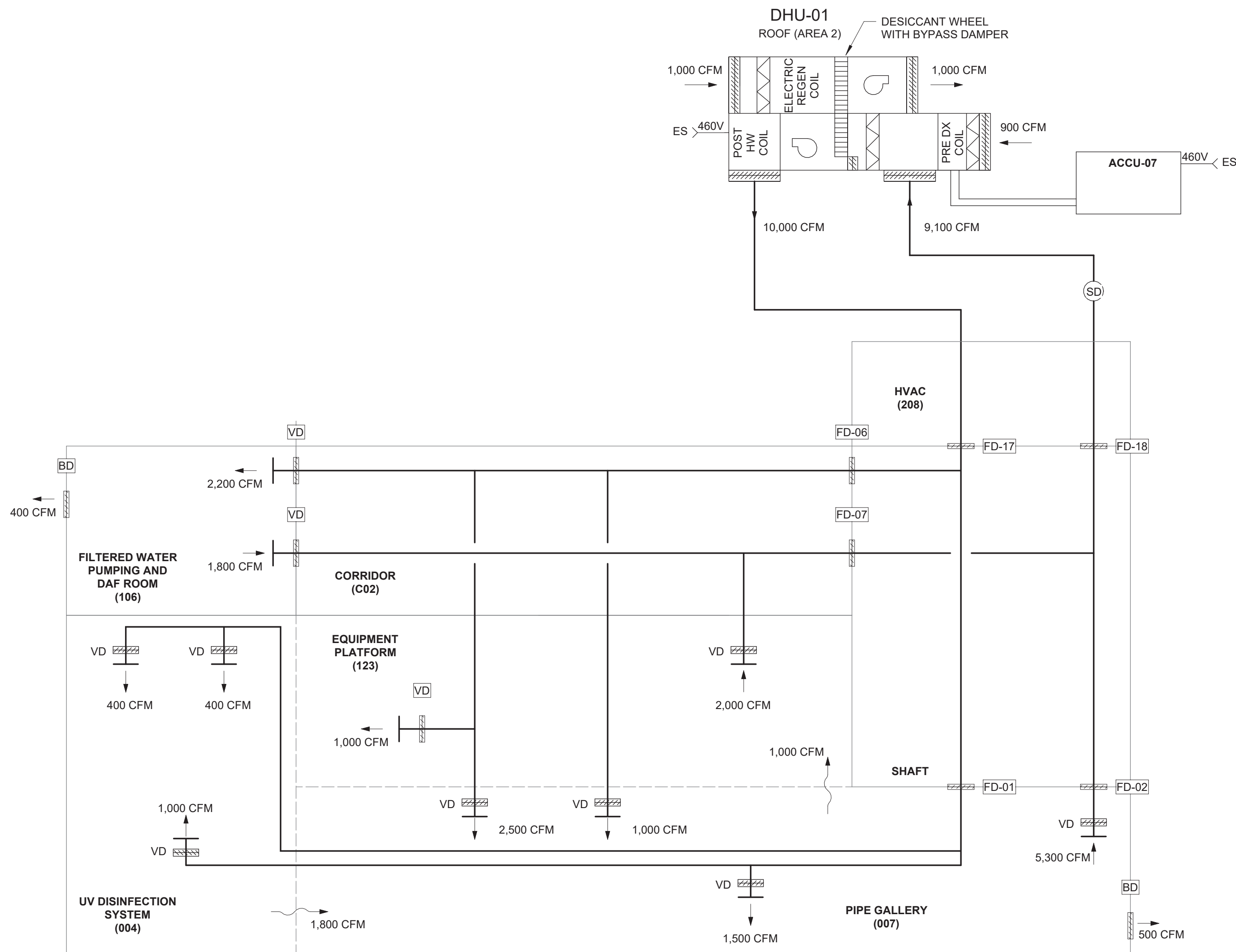



DIAGRAM SYMBOLS				GENERAL ABBREVIATIONS				GENERAL NOTES			
	BALL VALVE - NORMALLY OPEN		DUCT/PIPE FLOW DIRECTION	AI AL AC AFF AO APPROX ARCH ATC BFP BHP BLDG BOD BOT BTU BTU/HR CF CFM CI CL CLG CLR CONN CONT CU DAF DB DET DI DIA DIM DN DO DX EAT EFF EL ENGR EQPT ES ESP ETC EWT EX EXP FACP FLA FLEX FLG FPM FRP FT FT2 FT3 GA GAL GALV GC GPM GR HMI HP HR HZ HVAC ID IN INT JT KW LAT LB LF LWT MAINT MAX MBH	ANALOG INPUT ALUMINUM AIR CONDITIONING ABOVE FINISHED FLOOR ANALOG OUTPUT APPROXIMATE ARCHITECTURAL AUTOMATIC TEMPERATURE CONTROL BACKFLOW PREVENTER BRAKE HORSEPOWER BUILDING BOTTOM OF DUCT BOTTOM BRITISH THERMAL UNITS BRITISH THERMAL UNITS PER HOUR CUBIC FEET CUBIC FEET OF STANDARD AIR PER MINUTE CAST IRON CENTERLINE CEILING CLEAR CONNECTION CONTINUOUS; CONTINUATION COPPER DISSOLVED AIR FLotation DRY BULB DETAIL DISCRETE INPUT DIAMETER DIMENSION DOWN DO DIRECT EXPANSION REFRIGERANT ENTERING AIR TEMPERATURE EFFICIENCY ELEVATION ENGINEER EQUIPMENT ELECTRIC POWER SUPPLY EXTERNAL STATIC PRESSURE ET CETERA ENTERING WATER TEMPERATURE EXISTING EXPANSION FIRE ALARM CONTROL PANEL FULL LOAD AMPS FLEXIBLE FLANGE FEET PER MINUTE FIBERGLASS REINFORCED PLASTIC FOOT/FEET FEET SQUARED FEET CUBED GAUGE GALLON GALVANIZED GENERAL CONTRACTOR GALLONS PER MINUTE GRADE/GRAINS MOISTURE HUMAN MACHINE INTERFACE HORSEPOWER; HEAT PUMP HOUR HERTZ HEATING, VENTILATION AND AIR CONDITIONING INSIDE DIAMETER INCH INTERIOR JOINT KILLOWATT (1,000 WATTS) LEAVING AIR TEMPERATURE POUND LINEAR FEET LEAVING WATER TEMPERATURE MAINTENANCE MAXIMUM 1,000 BTU PER HOUR	MCA MCC MECH MFR MIN MISC MOCP MTD NC NFPA NO NOM NSPH NTS OAI OD OPER OPNG PCF PD PH PLC PREFAB PSF PSI(G) PVC PW QTY RECIRC RED REQD RM RND RPM SCADA SCH SECT SD SMACNA	MINIMUM CIRCUIT AMPACITY MOTOR CONTROL CENTER MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS MAXIMUM OVER-CURRENT PROTECTION MOUNTED NORMALLY CLOSED; NOISE CRITERIA NATIONAL FIRE PROTECTION ASSOCIATION NORMALLY OPEN NOMINAL NET POSITIVE SUCTION HEAD NOT TO SCALE OUTDOOR AIR INTAKE OUTSIDE DIAMETER OPERATOR OPENING POUNDS PER CUBIC FOOT PRESSURE DROP PHASE PROGRAMMABLE LOGIC CONTROLLER PREFABRICATED POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH (GUAGE) POLYVINYL CHLORIDE POTABLE WATER QUANTITY RECIRCULATION REDUCER REQUIRED ROOM ROUND REVOLUTIONS PER MINUTE SUPERVISORY CONTROL AND DATA ACQUISITION SCHEDULE SECTION SMOKE DETECTOR SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION SPECIFICATION STAINLESS STEEL STANDARD STRU TEMP THRU TOD TYP UL UTIL UV VEL VH VC VFD W/ W/O WB WC WG WMS WT YR	1. ALL DUCT DIMENSIONS ARE CLEAR DIMENSIONS TO INSIDE OF DUCT. DIMENSIONS TO DUCTS FROM FLOOR OR WALL SHALL BE TO THE OUTSIDE OF DUCT/INSULATION. WHERE INTERNAL INSULATION IS REQUIRED THE DUCT SIZE SHALL BE INCREASED TO GIVE CLEAR INSIDE DIMENSIONS AS NOTED ON THE DRAWINGS.			
	BALL VALVE - NORMALLY CLOSED		MAKE-UP/TRANSFER AIR FLOW DIRECTION					2. EQUIPMENT SIZES AND LOCATIONS ARE APPROXIMATE. ACTUAL DIMENSIONS TO BE DETERMINED BY EQUIPMENT FURNISHED. COORDINATE HVAC WORK WITH THE WORK OF ALL OTHER TRADES.			
	CHECK VALVE		SOLENOID ACTUATOR					3. FINAL OPENING DIMENSIONS, CONCRETE PAD SIZES, AND LOCATIONS MUST BE COORDINATED DURING CONSTRUCTION WITH APPROVED EQUIPMENT.			
	PRESSURE RELIEF VALVE		PNEUMATIC ACTUATOR					4. FINAL SIZES OF FLOOR OPENINGS, DUCT PLENUMS, TRANSITIONS AND PIPING CONNECTIONS TO ALL EQUIPMENT SHALL BE DETERMINED BY EQUIPMENT FURNISHED.			
	BUTTERFLY VALVE		MANUAL ACTUATOR					5. THE DRAWINGS ARE SCHEMATIC IN NATURE AND SHOW INTENDED GENERAL LOCATION OF HVAC EQUIPMENT AND SYSTEMS. NOT ALL OFFSETS AND REQUIRED FITTINGS FOR ACTUAL FIELD INSTALLATION ARE INTENDED TO BE SHOWN FOR INSTALLATION OF SYSTEMS IN THE SPACE AVAILABLE IN CONSIDERATION OF WORK OF OTHER TRADES AND FIELD CONDITIONS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL OFFSETS IN DUCTWORK AND PIPING AS REQUIRED TO AVOID SUCH INTERFERENCES OR FIELD CONDITIONS AT NO ADDITIONAL COST TO THE AUTHORITY.			
	GATE VALVE		MOTOR ACTUATOR					6. FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED OR WIDTH OF DUCT IN PLAN VIEW.			
	BALANCING COCK		ELECTROHYDRAULIC ACTUATOR					7. COORDINATE THE REQUIREMENTS FOR HVAC OPENINGS AND SLEEVES IN BUILDING ELEMENTS WITH ALL TRADES.			
	THREE WAY VALVE							8. THE CONTRACTOR SHALL REFER TO SPECIFICATION SECTION 09 91 00 FOR PAINTING REQUIREMENTS UNLESS OTHERWISE NOTED.			
	UNION		PUMP					9. THE CONTRACTOR SHALL COORDINATE DUCTWORK INSTALLATION WITH OTHER TRADES SO THAT THE DUCTWORK IS INSTALLED BEFORE THE PIPING, LIGHTING AND ELECTRICAL CONDUIT.			
	GLOBE VALVE							10. PROVIDE ADEQUATE SUPPORT, PER THE MANUFACTURER'S RECOMMENDATIONS, FOR ALL HVAC EQUIPMENT.			
	LOUVER		FILTER					11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ELECTRICAL RATINGS FROM CERTIFIED DRAWINGS OF EQUIPMENT AND SHALL MAKE ANY BRANCH CIRCUIT DISTRIBUTION MODIFICATION REQUIREMENTS WITHOUT ANY ADDITIONAL COST TO THE AUTHORITY. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF SUCH CHANGES FOR APPROVAL BY ENGINEER.			
	STRAINER		UNIT HEATER					12. WHEREVER THE REQUIREMENTS AND REGULATIONS OF STATE, FEDERAL AND LOCAL AUTHORITIES HAVING JURISDICTION DIFFER FROM THE DRAWINGS OR SPECIFICATIONS, THEY SHALL TAKE PRECEDENCE AND SHALL BE MADE PART OF THE CONTRACT (EXCEPT WHERE THE DRAWINGS OR SPECIFICATIONS ARE MORE STRINGENT).			
	PRESSURE RELIEF VALVE							13. THERMOSTATS, SENSORS, AND/OR CONTROL PANEL LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE COORDINATED TO SUIT FIELD CONDITIONS.			
	PRESSURE RELIEF VALVE		MINIMUM EQUIPMENT CLEARANCES					14. INSTALL WALL MTD SENSORS, CONTROLS AND THERMOSTATS 4'-0" AFF UNLESS OTHERWISE NOTED. ALIGN WITH OTHER NEARBY ITEMS SUCH AS LIGHT SWITCHES. DO NOT INSTALL CLOSER THAN 6-INCHES FROM EDGE OF DOOR FRAME OR CORNER OF WALL AS SHOWN ON ARCH PLANS. WHERE CONFLICTS MAY OCCUR WITH ITEMS SUCH AS LIGHT SWITCHES, MOUNT THE SENSOR OR CONTROL DEVICE 4'-6" AFF CENTERED ABOVE THE LIGHT SWITCH.			
	VACUUM RELIEF VALVE							15. PROVIDE ADEQUATE MEANS OF ACCESS CLEARANCE FOR ALL HVAC/MECHANICAL EQUIPMENT AND SYSTEMS THAT REQUIRE ACCESS FOR PROPER OPERATION, MAINTENANCE AND REPAIR PER RECOMMENDED MANUFACTURER CLEARANCES. PROVIDE ACCESS DOORS WHERE NECESSARY IN FINISHED WALLS OR DRYWALL CEILINGS FOR ACCESS TO VALVES, DAMPERS, OR CONTROL DEVICES.			
	COMBINATION VACUUM AND PRESSURE RELIEF VALVE							16. COORDINATE THE REQUIREMENTS OF HVAC HANGERS AND SUPPORTS W/ ALL TRADES PROVIDING STRUCTURAL AND/OR ARCHITECTURAL BUILDING ELEMENTS WHICH HVAC SUPPORTS SHALL INTERFACE.			
	PRESSURE-REDUCING REGULATOR							17. THE CONTRACTOR SHALL PROVIDE ALL FIRESTOPPING AND PIPE SLEEVES FOR ALL PIPE AND DUCT PENETRATIONS THRU FIRE RATED BUILDING ASSEMBLIES. REFER TO ARCHITECTURAL PLAN DRAWINGS FOR LOCATIONS OF FIRE RATED ASSEMBLIES AND FIRESTOPPING DETAILS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS TO ALL FIRE DAMPERS AND PROVIDING ADDITIONAL FIRE DAMPERS THAT ARE REQUIRED AND NOT SHOWN ON DRAWINGS FOR UP TO FOUR ADDITIONAL FIRE DAMPERS.			
	BACKPRESSURE REGULATOR							18. DUCTWORK ACCESS DOORS ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS. ACCESS DOORS SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTRACT SP ECIFICATIONS AND AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.			
	AIR RELEASE VALVE							19. THE HOT WATER SYSTEM DESIGN IS BASED ON A 25% PROPYLENE GLYCOL SOLUTION FOR BURST PROTECTION DOWN TO AN OUTDOOR AMBIENT TEMPERATURE OF 2°F.			
	PANEL LAMP							20. REFER TO SPECIFICATION SECTION 23 09 00 FOR EQUIPMENT CONTROL STRATEGIES AND TEMPERATURE SET-POINTS.			
	SWITCH POSITIONS							21. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES SO AIR CONDITIONING EQUIPMENT, RELATED DUCTWORK, PIPING, AND APPURTENANCES ARE NOT LOCATED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.			
	3-POSITION SWITCH							22. APPLICABLE CODES: 2020 NEW YORK STATE MECHANICAL CODE; 2020 NEW YORK STATE BUILDING CODE; 2020 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, CODE OF THE VILLAGE OF HARRISON.			
	2-POSITION SWITCH										
	DAMPER TYPE										
	DAMPER										
	ELEMENT TYPE										
	HEATING OR COOLING ELEMENT										

[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> <span style="margin-right: 10px;">0</span>  <span style="margin-left: 10px;">1/2" 1"</span> </div>

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

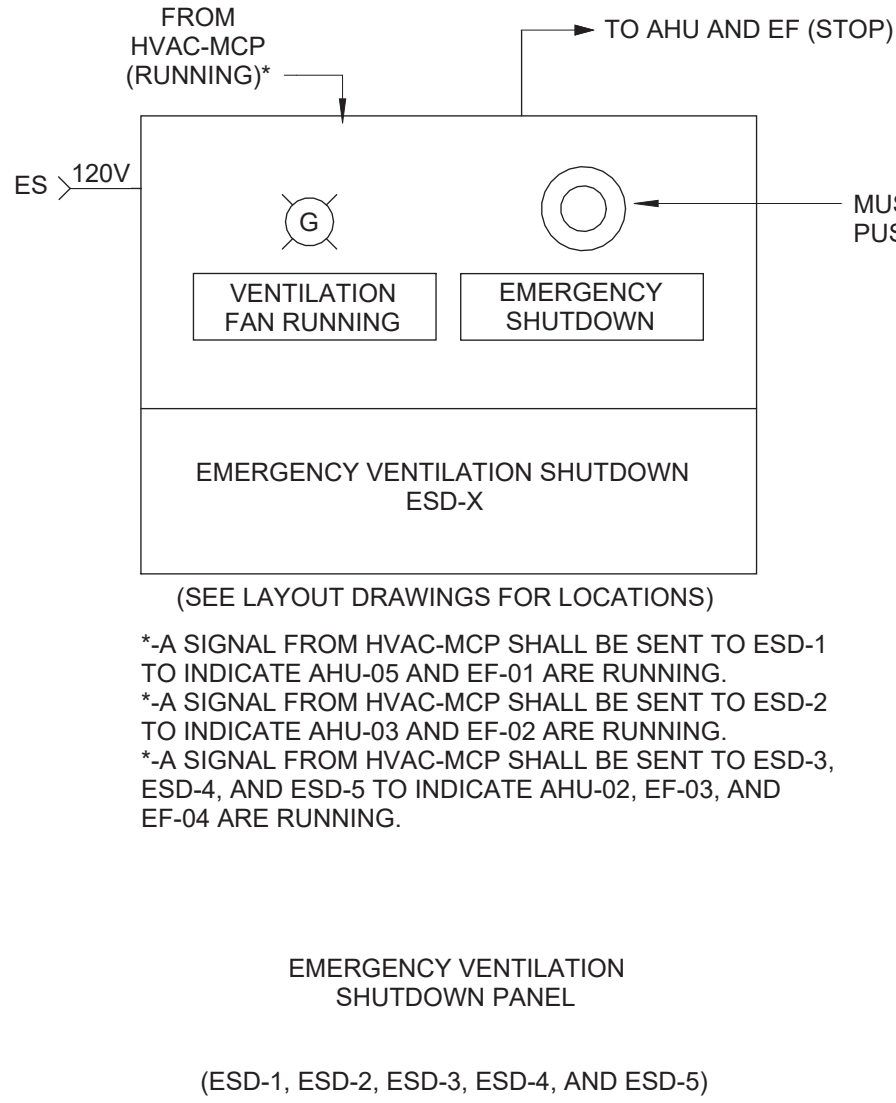
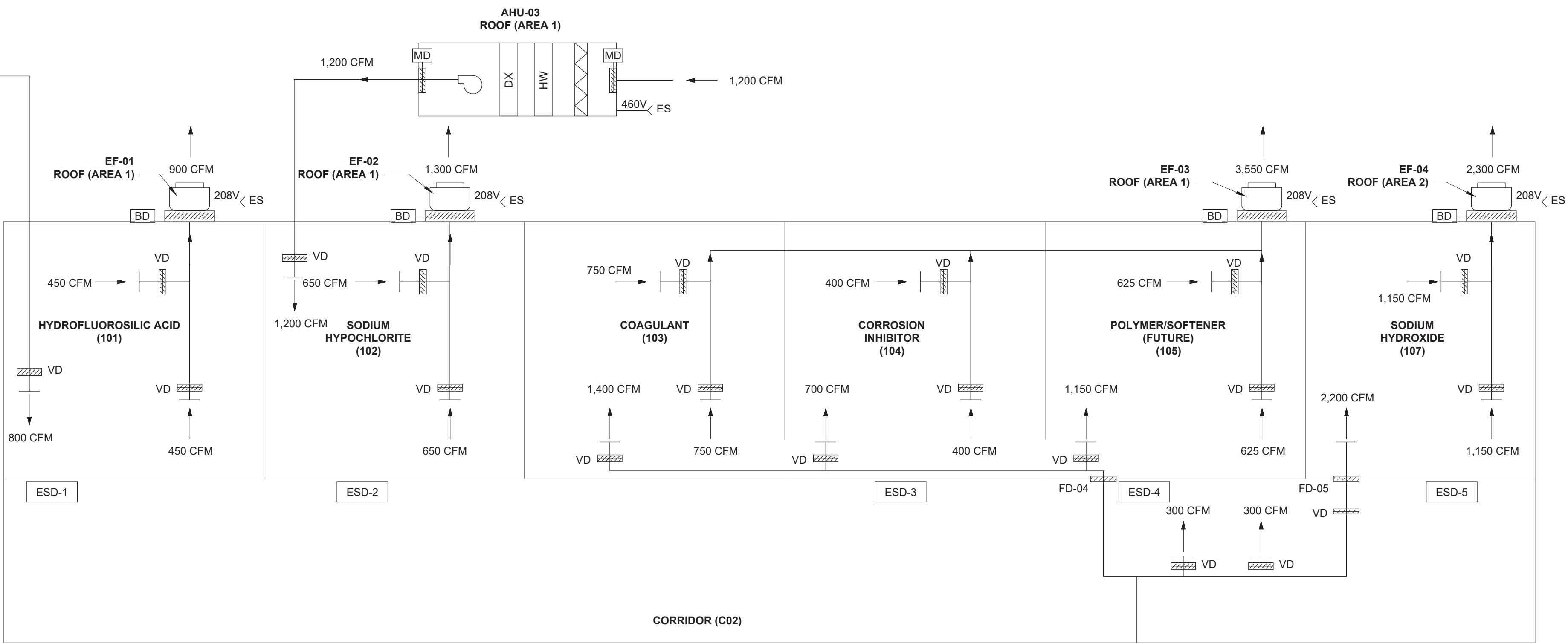
# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-002



CHEMICAL AREA VENTILATION						
CHEMICAL AREA	AREA (FT2)	VOLUME (FT3)	MINIMUM EXHAUST AIRFLOW REQUIRED (CFM/FT2)	PROPOSED EXHAUST AIRFLOW		
				CFM/FT2	CFM	ACH
HYDROFLUOSILICIC ACID (101)	440	10,550	1.0	2.0	900	5.1
SODIUM HYPOCHLORITE (102)	730	17,500	1.0	1.8	1,300	4.5
COAGULANT (103)	865	20,750	1.0	1.7	1,500	4.3
CORROSION INHIBITOR (104)	440	10,550	1.0	1.8	800	4.5
POLYMER/SOFTENER (FUTURE) (105)	760	18,250	1.0	1.6	1,250	4.1
SODIUM HYDROXIDE (107)	1320	31,700	1.0	1.7	2,300	4.4

- NOTES:
1. MINIMUM EXHAUST AIRFLOW RATES AS REQUIRED BY THE 2020 NEW YORK STATE FIRE CODE SECTION 5004.3.1.

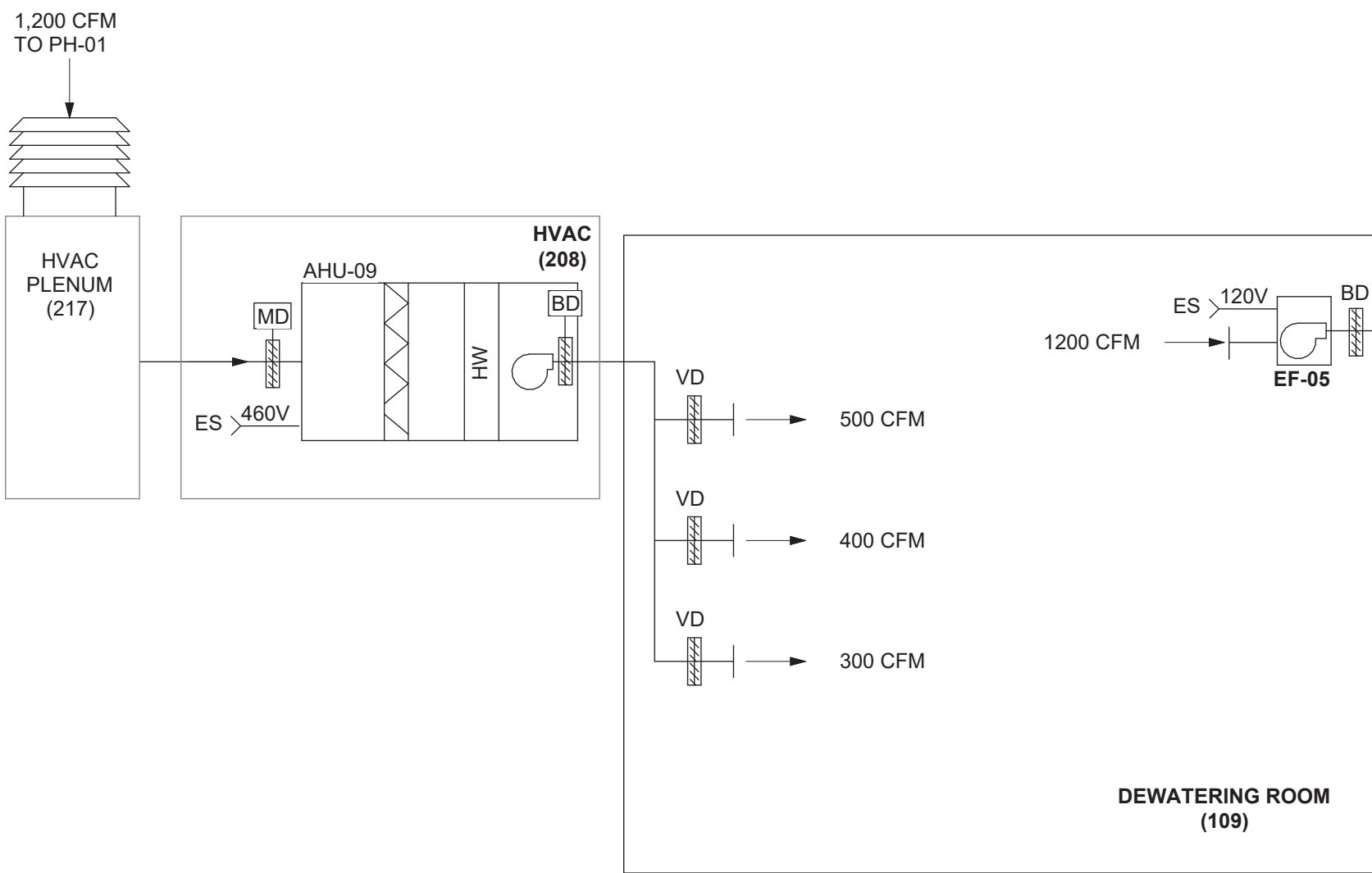
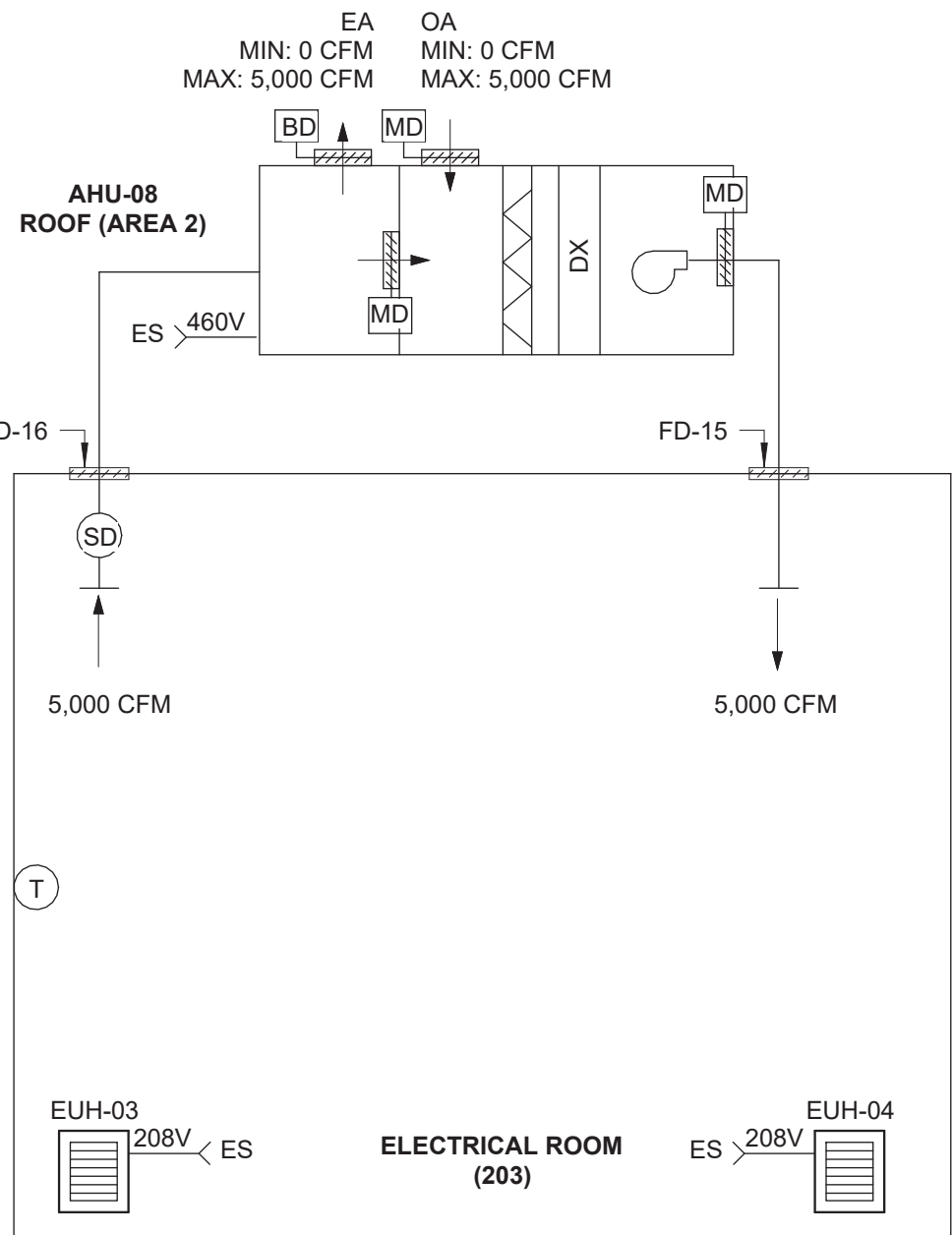
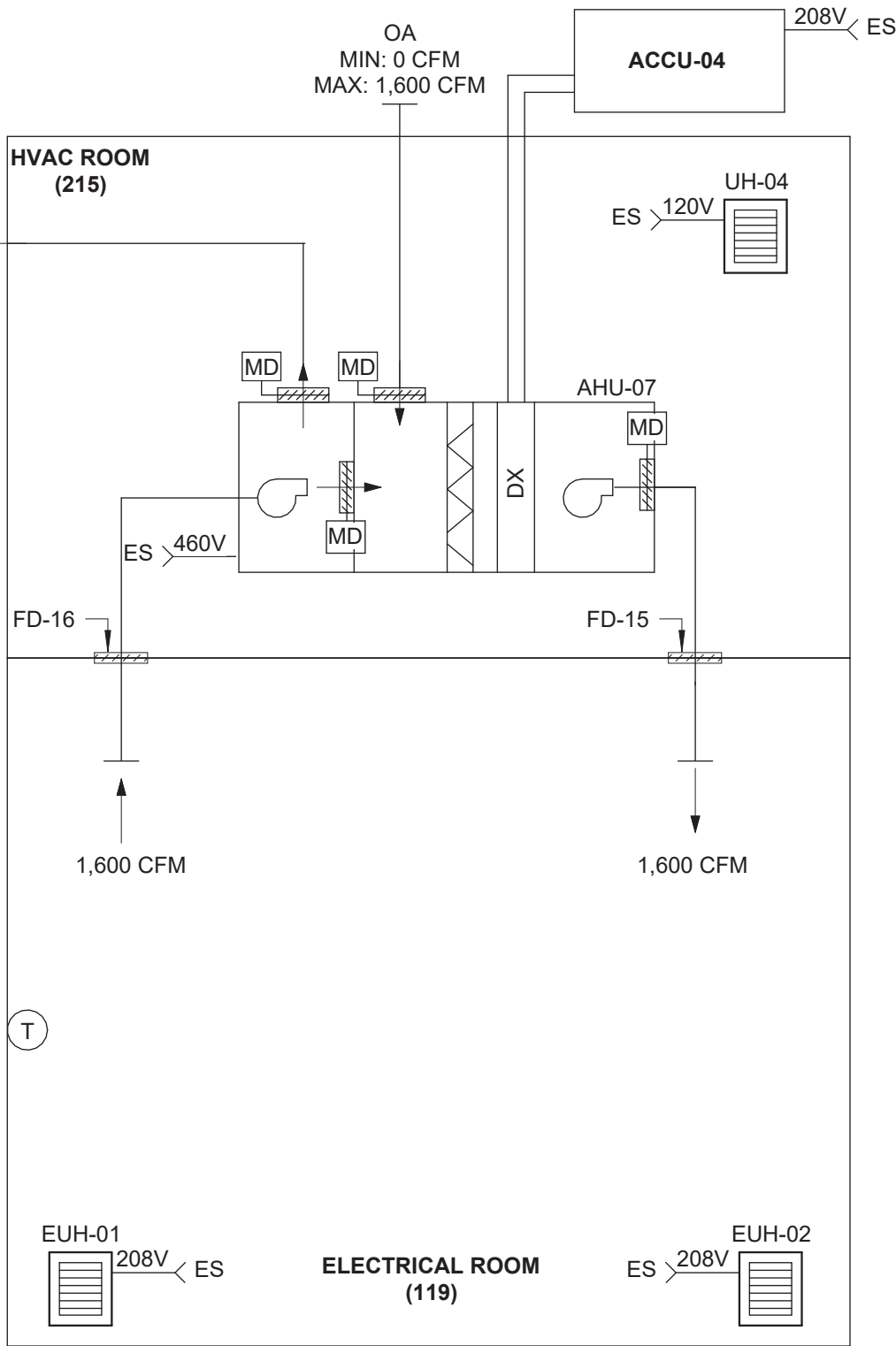


(SEE LAYOUT DRAWINGS FOR LOCATIONS)

\*A SIGNAL FROM HVAC-MCP SHALL BE SENT TO ESD-1 TO INDICATE AHU-05 AND EF-01 ARE RUNNING.

\*A SIGNAL FROM HVAC-MCP SHALL BE SENT TO ESD-2 TO INDICATE AHU-03 AND EF-02 ARE RUNNING.

\*A SIGNAL FROM HVAC-MCP SHALL BE SENT TO ESD-3, ESD-4, AND ESD-5 TO INDICATE AHU-02, EF-03, AND EF-04 ARE RUNNING.



WARNING

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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: M. GIORDANO
				DRAWN BY: R. CHIN
				CHECKED BY: R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

BID SET



**Hazen**

HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
CONTROL DIAGRAMS - SHEET 2

DATE: FEB 2025

HAZEN NO.: 90388-000

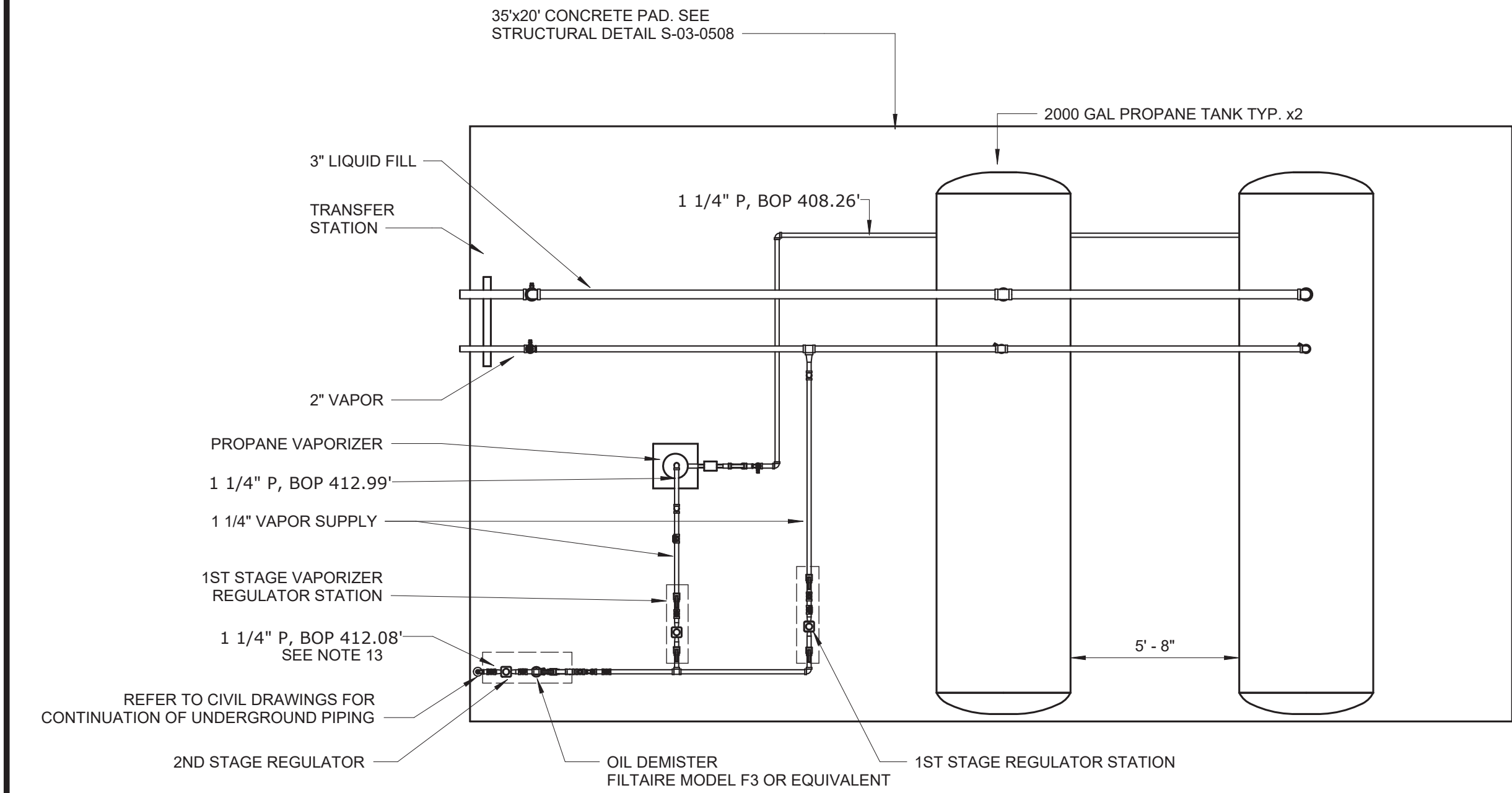
CONTRACT NO.: A1364-A

DRAWING NUMBER: H-003

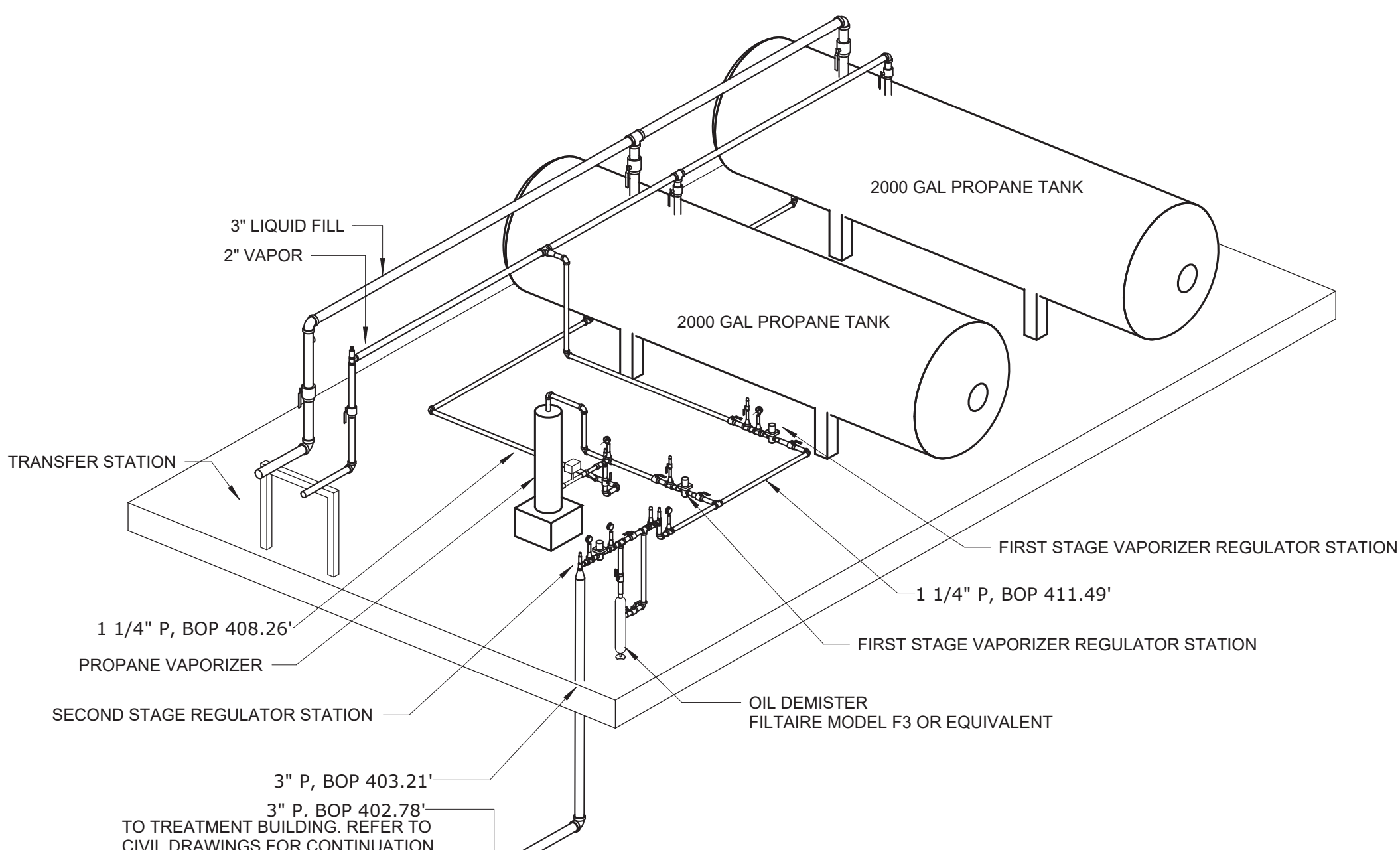






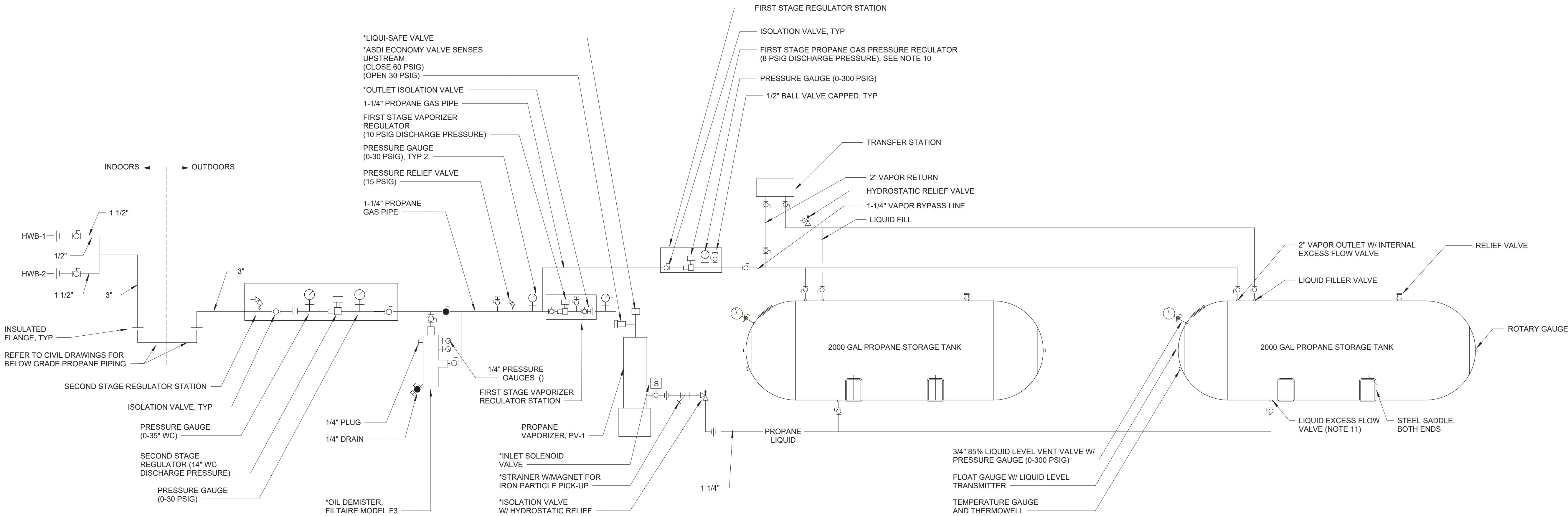


PROPANE SYSTEM LAYOUT  
1/4" = 1'-0"



PROPANE SYSTEM ISOMETRIC

- NOTES:
1. CONTRACTOR SHALL REFER TO AND COORDINATE NEW WORK WITH OTHER TRADES.
  2. CONTRACTOR SHALL COORDINATE PROPANE GAS PIPE ROUTING INDICATED ON DRAWINGS WITH STRUCTURE, LIGHTS, DUCTS, CONDUIT, EQUIPMENT, ETC. PRIOR TO INSTALLATION AND MAKE REQUIRED ADJUSTMENTS FOR A COMPLETE AND WORKING SYSTEM.
  3. ALL STEEL HANGERS, SUPPORTS, INSULATION SHIELDS, CLAMPS, STEEL ANGLES, THREADED RODS, CONCRETE INSERTS, NUTS, ROD COUPLINGS, CHANNELS ETC SHALL BE ELECTRO-GALVANIZED OR HOT DIP GALVANIZED.
  4. ALL NEW PROPANE SYSTEM COMPONENTS INCLUDING, BUT NOT LIMITED TO, THE PROPANE STORAGE TANK, REGULATORS, VALVES, GAUGES, AND EXCLUDING THE HOT WATER BOILERS, SHALL BE PROVIDED BY THE CONTRACTOR, THROUGH ONE VENDOR. THE CONTRACTOR, THROUGH THE VENDOR, SHALL HAVE SOLE RESPONSIBILITY OF MATCHING ALL COMPONENTS AND PROVIDING EQUIPMENT WHICH FUNCTIONS TOGETHER AS A SYSTEM.
  5. PROPANE PIPING BASED ON BOILER MODELS IN THE SCHEDULE. CONTRACTORS SHALL COORDINATE RATINGS OF EQUIPMENT INSTALLED. IF ALTERNATE EQUIPMENT IS INSTALLED, COORDINATE REGULATOR AND PIPE SIZE TO MEET FLOW AND PRESSURE REQUIRED.
  6. PROVIDE DIELECTRIC INSULATION KITS FOR ALL PIPING CONNECTIONS INVOLVING DISSIMILAR MATERIALS, TRANSITIONS BETWEEN ABOVE GRADE AND BELOW GRADE, OR CONNECTIONS BETWEEN INTERIOR AND EXTERIOR PIPES.
  7. REFER TO SPECIFICATION 23 10 01 FOR ADDITIONAL REQUIREMENTS FOR PROPANE PIPING, EQUIPMENT AND ACCESSORIES.
  8. SEE DRAWINGS FOR PROPANE LOCATION AND PLAN VIEW AND DETAILS.
  9. TANK RELIEF VALVE "START-TO-LEAK" PRESSURE SET-POINT SHALL BE 250 PSIG.
  10. FIRST STAGE REGULATOR SHALL BE INSTALLED AT HIGH POINT IN VAPOR PIPING SYSTEM.
  11. THE CONTRACTOR SHALL PROVIDE AN INTERNAL EXCESS FLOW VALVE (REGO A3213D) FITTED FOR REMOTE CABLE CLOSURE AND AUTOMATIC SHUTOFF EQUIPPED WITH THERMAL ACTIVATION (REGO 3200C - REMOTE CABLE KIT AND REGO 3200L - OPERATING LEVER). THE REMOTE OPERATING LEVER SHALL BE LOCATED IN ACCORDANCE WITH SECTION 5.9.4.1.(D).(4) OF NFPA 58-2020.



PROPANE SYSTEM FLOW DIAGRAM

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					PROJECT ENGINEER:	R. FROST
					DESIGNED BY:	M. GIORDANO
					DRAWN BY:	R. CHIN
					CHECKED BY:	R. VAN DYKE
					IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
REV	ISSUED FOR	DATE	BY			

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
CONTROL DIAGRAMS - SHEET 5

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-006




1. PLACE A RED WARNING SIGN CONSPICUOUSLY ON THE FACE OF EACH HVAC CONTROL PANEL WHICH READS AS FOLLOWS:

2. FOR SEQUENCE OF OPERATION SEE SPECIFICATION 23 09 02.
3. SIGNALS SHOWN IN CONTROL DIAGRAMS, UNLESS OTHERWISE STATED, TERMINATE AT OR ORIGINATE FROM THE HVAC MASTER CONTROL PANEL.
4. POWER SIGNALS FOR DAMPERS AND INSTRUMENTS ARE NOT SHOWN ON THE CONTROL DIAGRAM. POWER AND CONTROL TO ACTUATORS SHALL BE FROM THE CONTROL PANEL THE DEVICE IS CONNECTED TO.
5. THE FOLLOWING SIGNALS SHALL BE HARDWIRED:
  - 5.1. FAN MCC START/STOP - DI
  - 5.2. FAN MCC READY - DI
  - 5.3. FAN MCC RUNNING - DO
  - 5.4. FAN MCC FAULT - DO
6. BACNET DATALINK COMMUNICATION. SEE SPECIFICATION 23 09 02 FOR DETAILS.
7. THE FOLLOWING SIGNALS SHALL BE HARDWIRED:
  - 7.1. DAMPERS OPEN END SWITCH - DI
  - 7.2. FLOW COILS - DI
  - 8.1. VENT SYSTEM SHUTDOWN - DI
  - 8.2. VENT SYSTEM PURGE - DI
9. THE FOLLOWING SIGNALS SHALL BE HARDWIRED:
  - 9.1. GENERAL ALARM - DO



## HVAC MASTER CONTROL PANE

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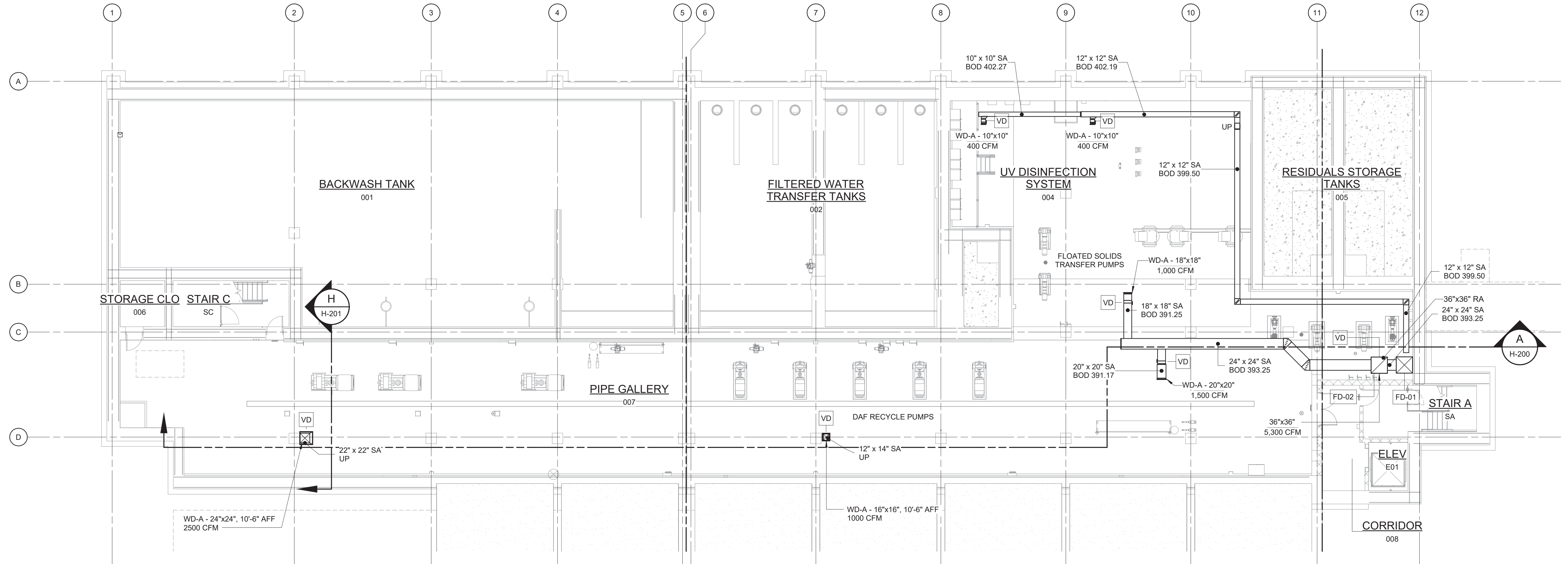
PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div> 0 1/2" 1"  </div>

A circular professional engineer seal for the State of New York. The outer ring contains the text "STATE OF NEW YORK" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars. The inner ring contains the name "MARC A. GIORDANO" at the top and the license number "099856" at the bottom. In the center is a crest featuring a sun rising over a landscape with a bridge and water. Overlaid on the seal is a handwritten signature in black ink that reads "Marc A. Giordano".

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

FILTRATION PLANT  
HVAC  
CONTROL DIAGRAMS - SHEET 6


252 of 392



10 8 6 4 2 0 11'

$3/32" = 1'-0"$

[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
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CHECKED BY:	R. VAN DYKE
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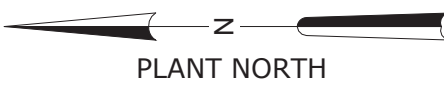
**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 383.00 - OVERALL PLAN

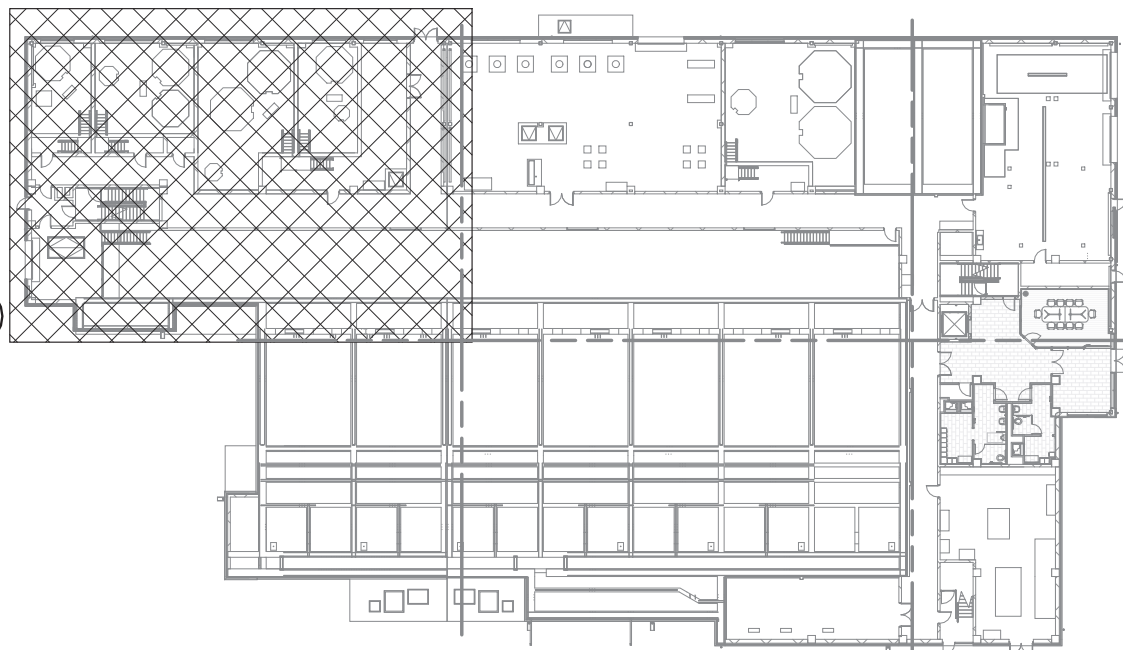
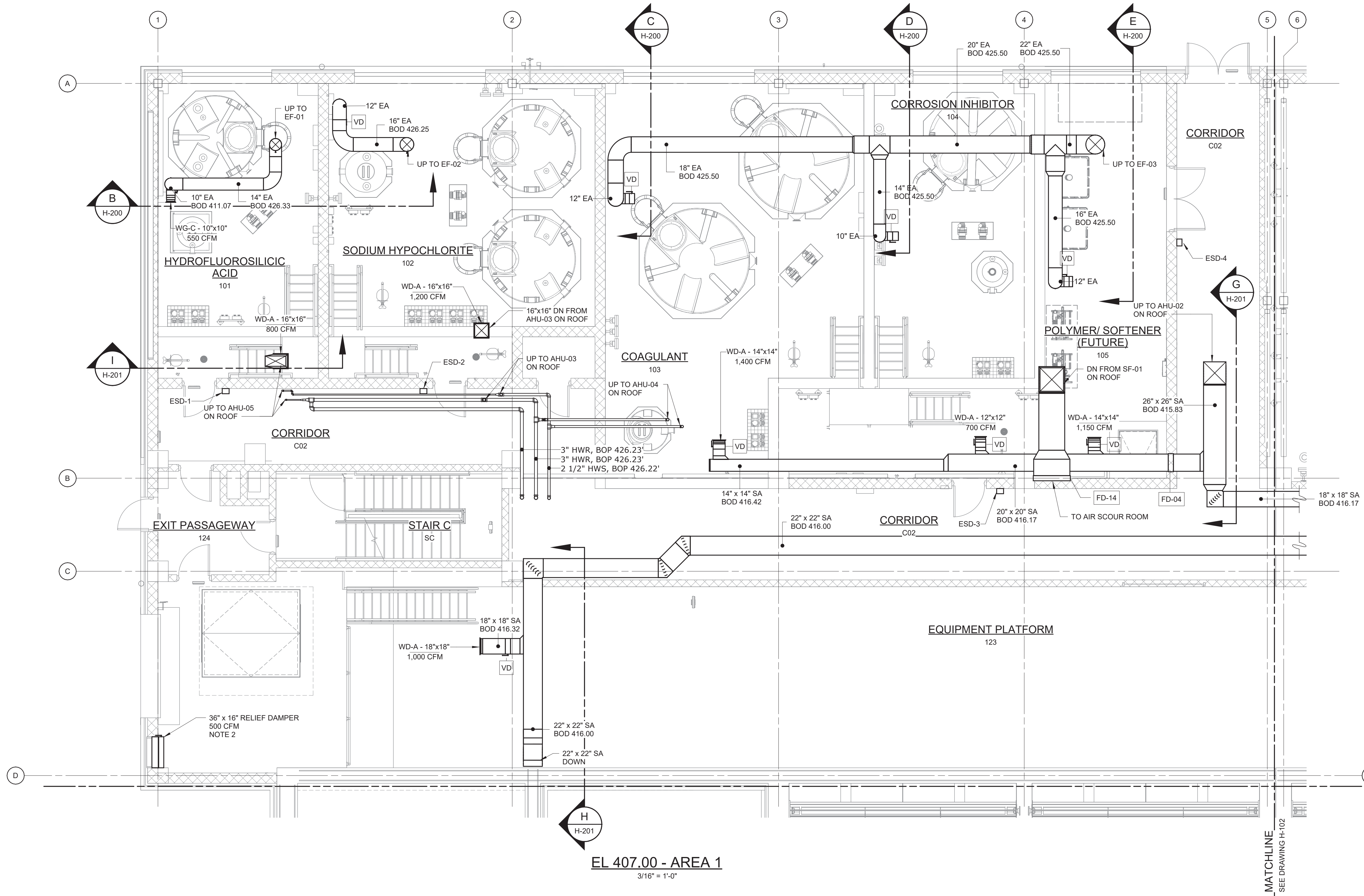
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-100





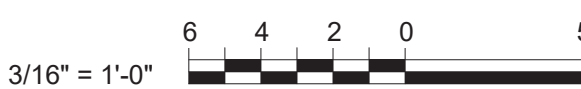
NOTES:

1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
2. ATTACH BAROMETRIC RELIEF DAMPER TO LOUVER, WITH ADJUSTABLE COUNTERWEIGHTS FOR SETTING RELIEF PRESSURE TO 0.1 INWG. BASIS OF DESIGN SHALL BE GREENHECK EM-30 SERIES.



KEY PLAN

NTS



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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



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WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

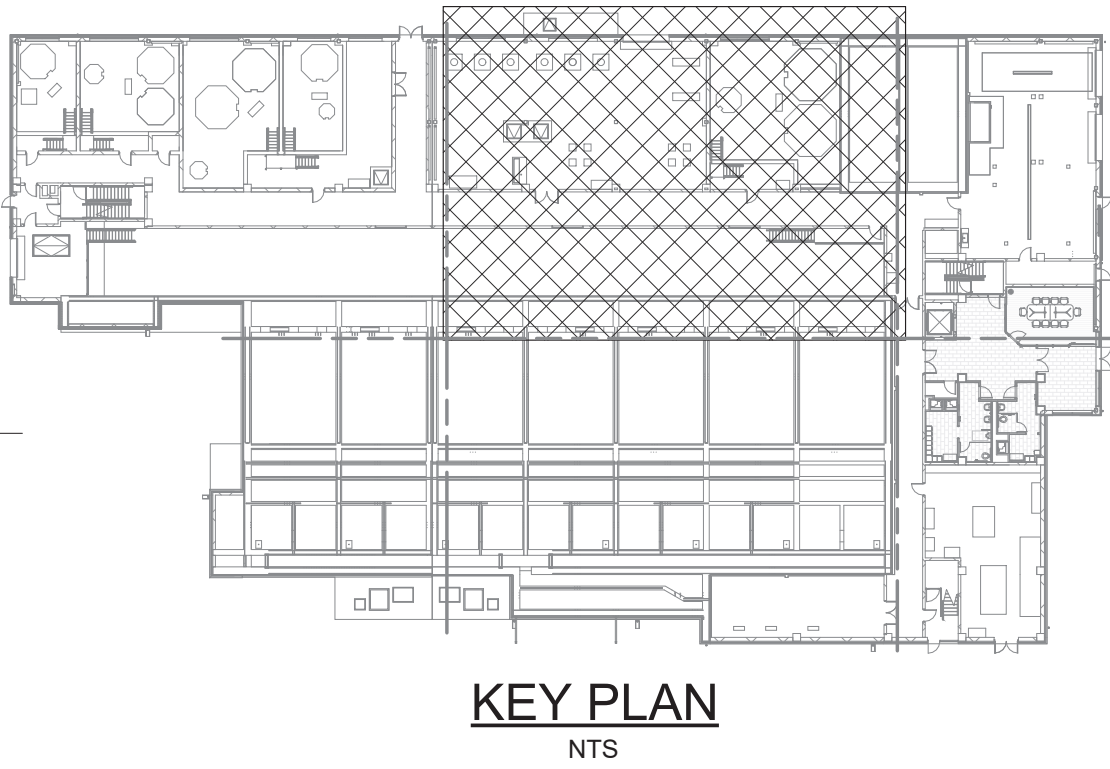
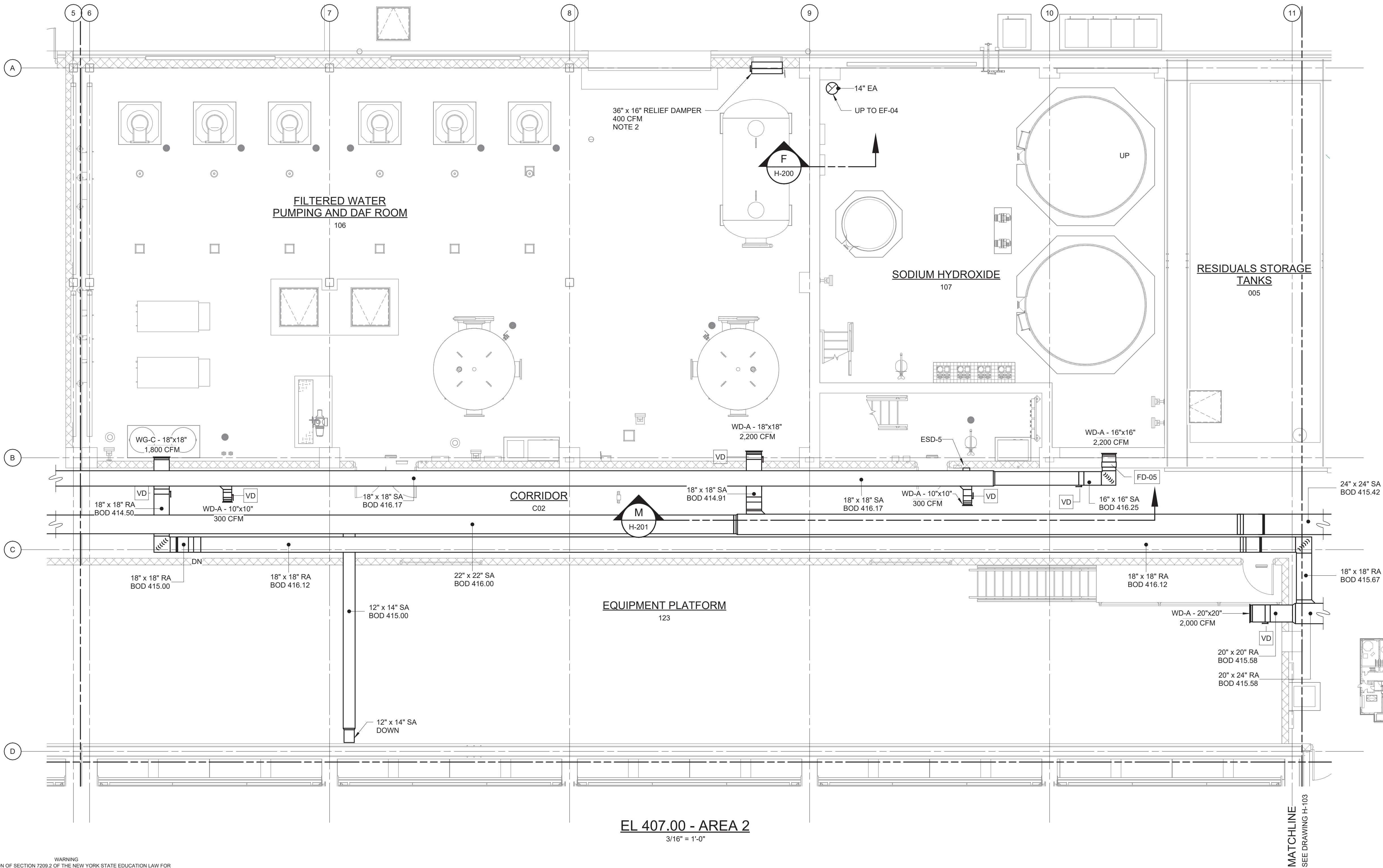
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 407.00 - AREA 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-101



- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. ATTACH BAROMETRIC RELIEF DAMPER TO LOUVER, WITH ADJUSTABLE COUNTERWEIGHTS FOR SETTING RELIEF PRESSURE TO 0.1 INWG. BASIS OF DESIGN SHALL BE GREENHECK EM-30 SERIES.



3/16" = 1'-0" 6 4 2 0 5'

WARNING  
IT IS A VIOLATION OF SECTION 2209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

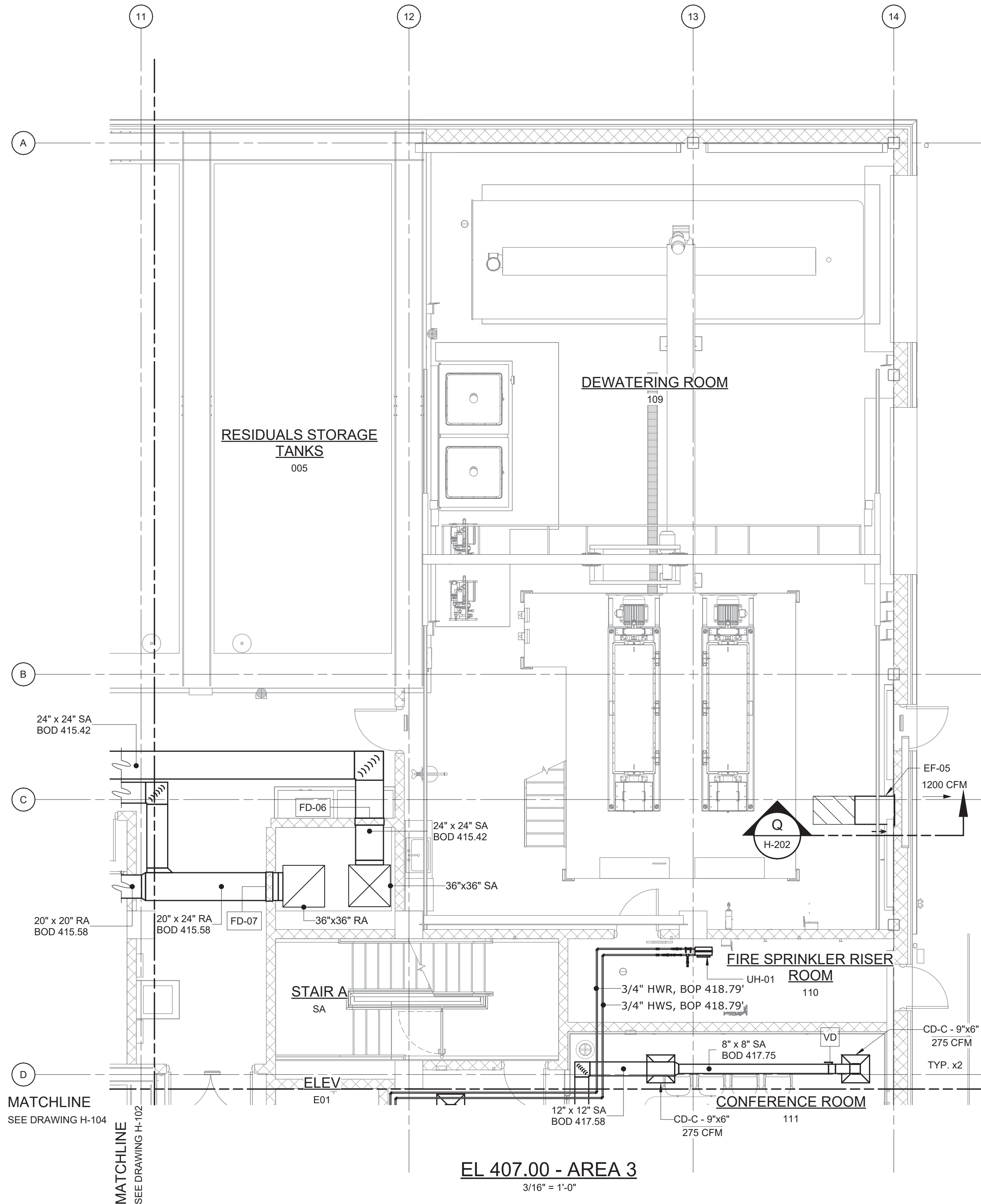
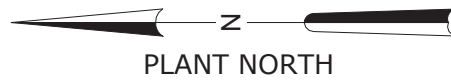
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 407.00 - AREA 2

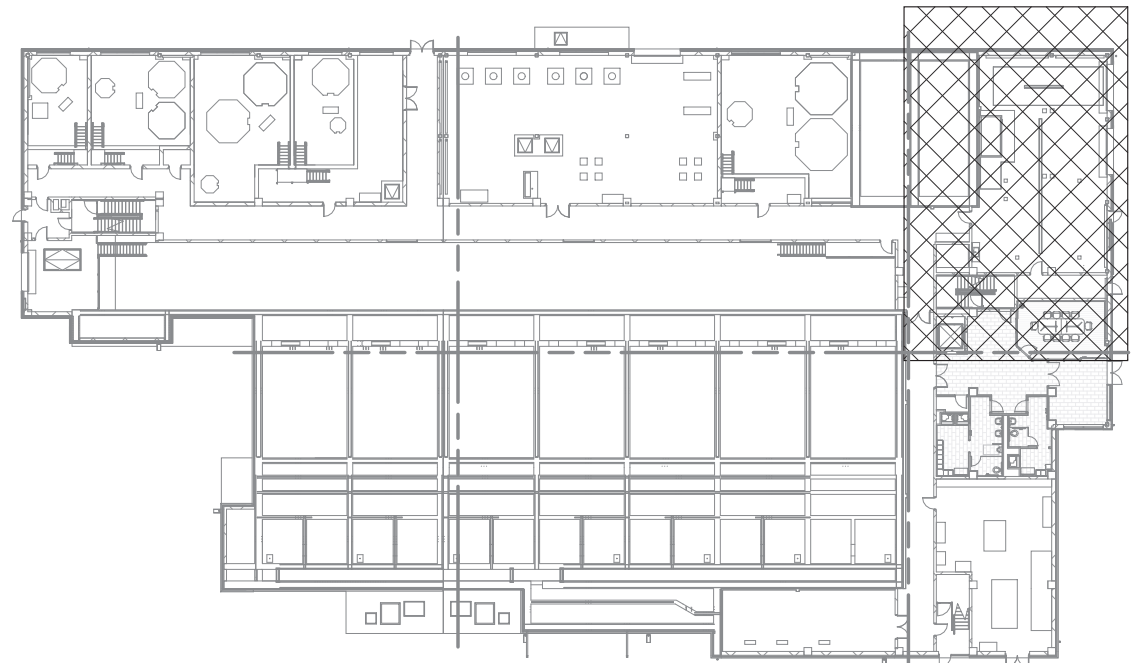
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-102





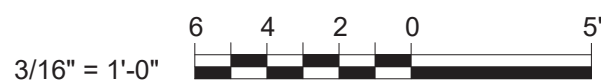
NOTES:

1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
2. COORDINATE ALL CEILING DIFFUSERS WITH REFLECTED CEILING PLAN ON THE ARCHITECTURAL DRAWINGS.



KEY PLAN

NTS



WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



**Hazen**

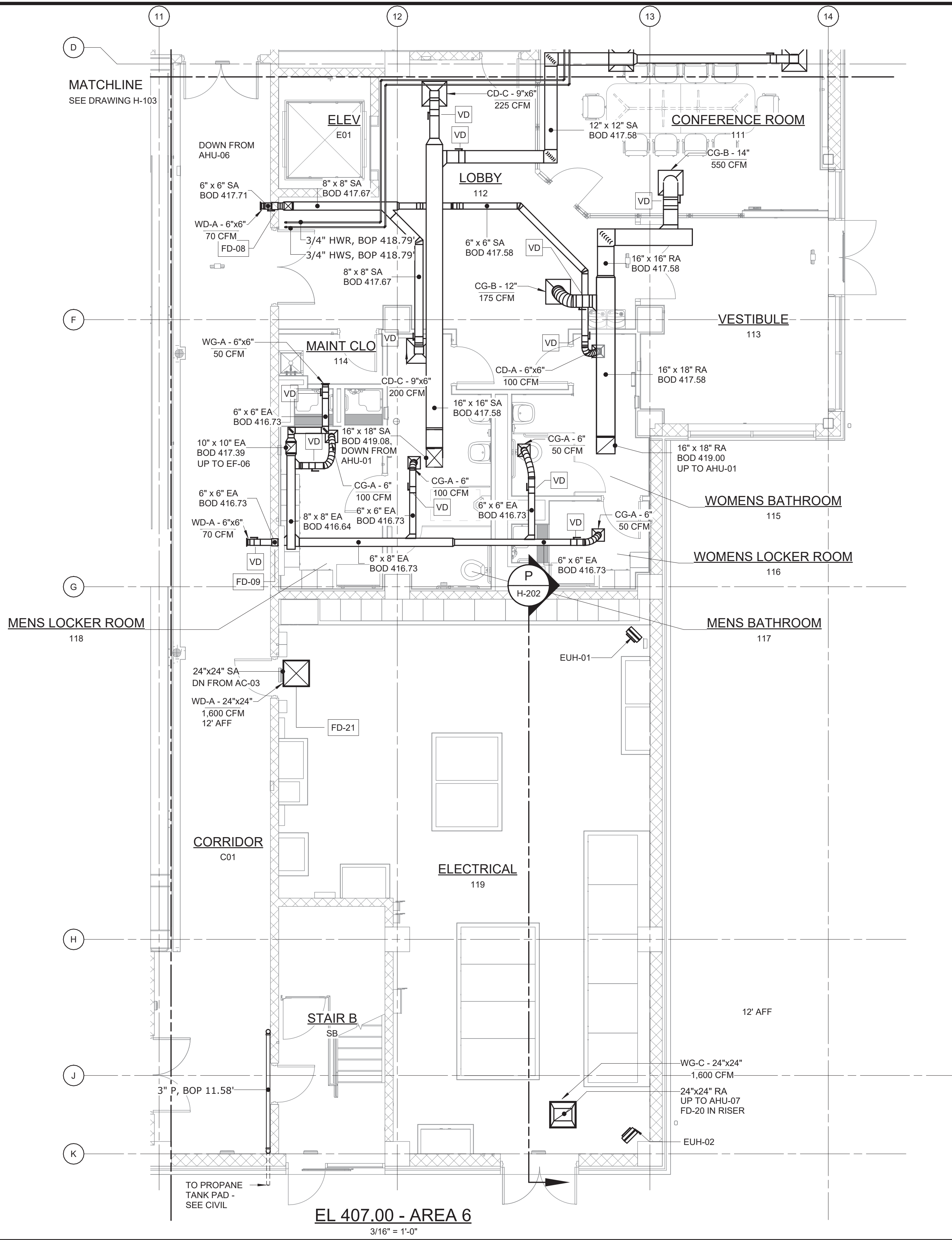
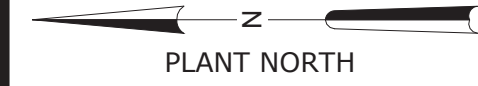
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

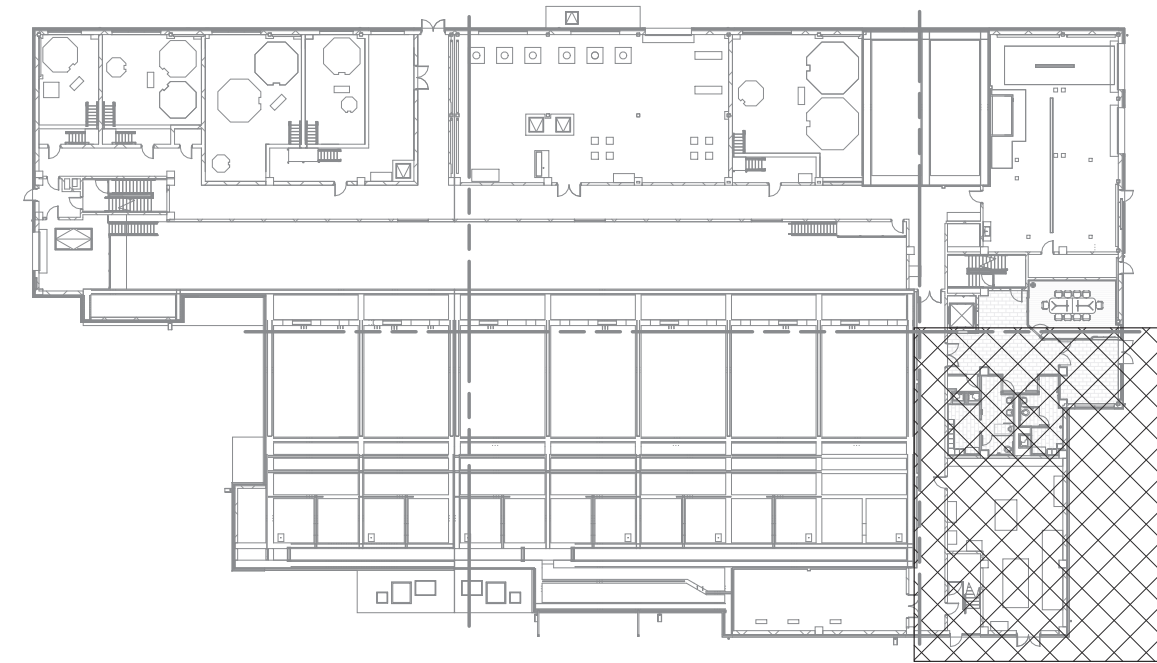
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 407.00 - AREA 3

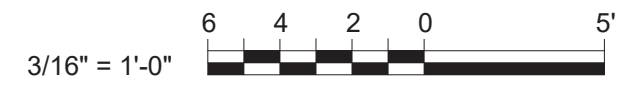
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-103



- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. COORDINATE ALL CEILING DIFFUSERS WITH REFLECTED CEILING PLAN ON THE ARCHITECTURAL DRAWINGS.



KEY PLAN  
NTS



WARNING  
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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	R. CHIN
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div><div>01/2"1"</div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div></div>
REV	ISSUED FOR	DATE	BY		

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

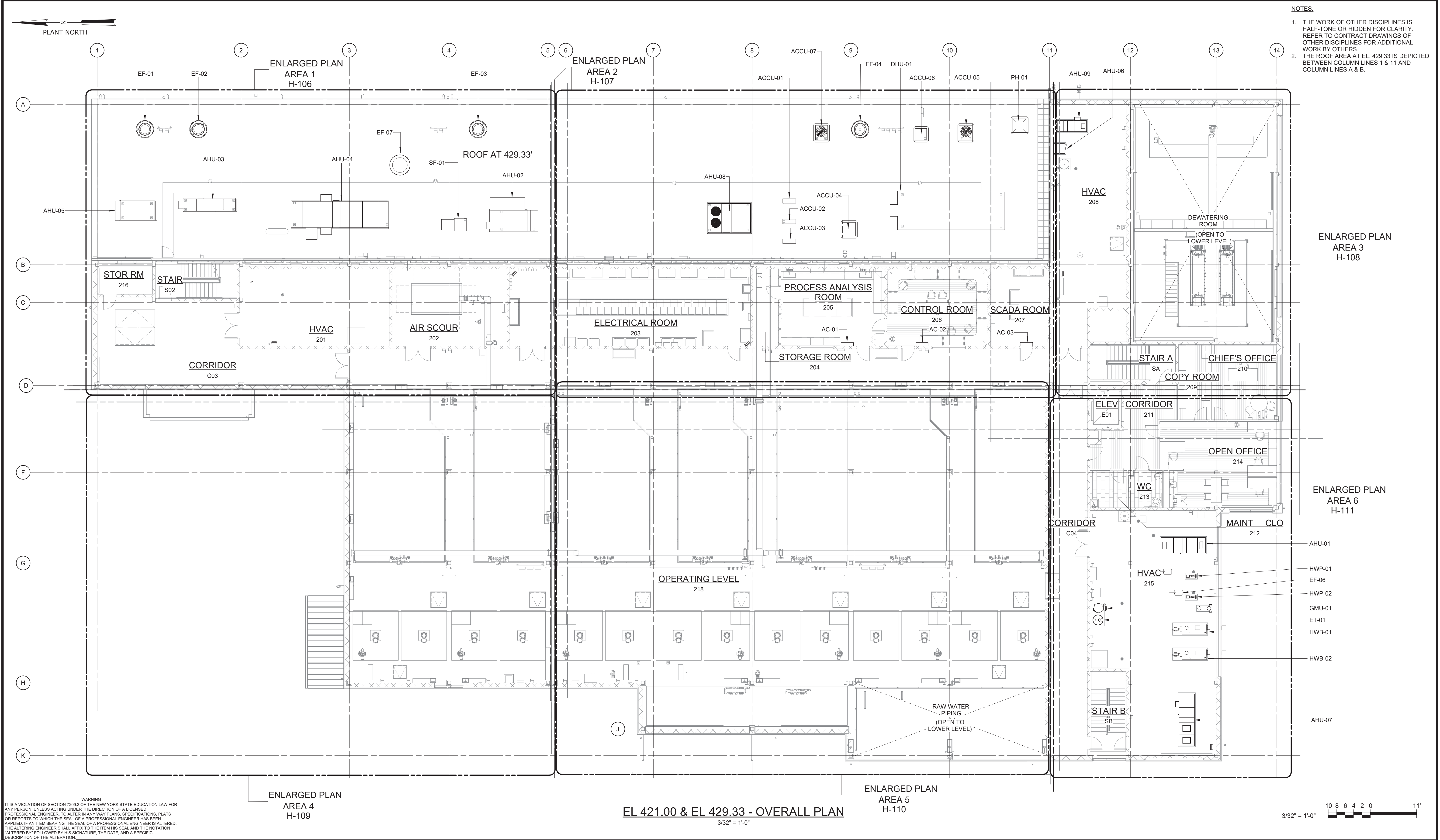
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 407.00 - AREA 6

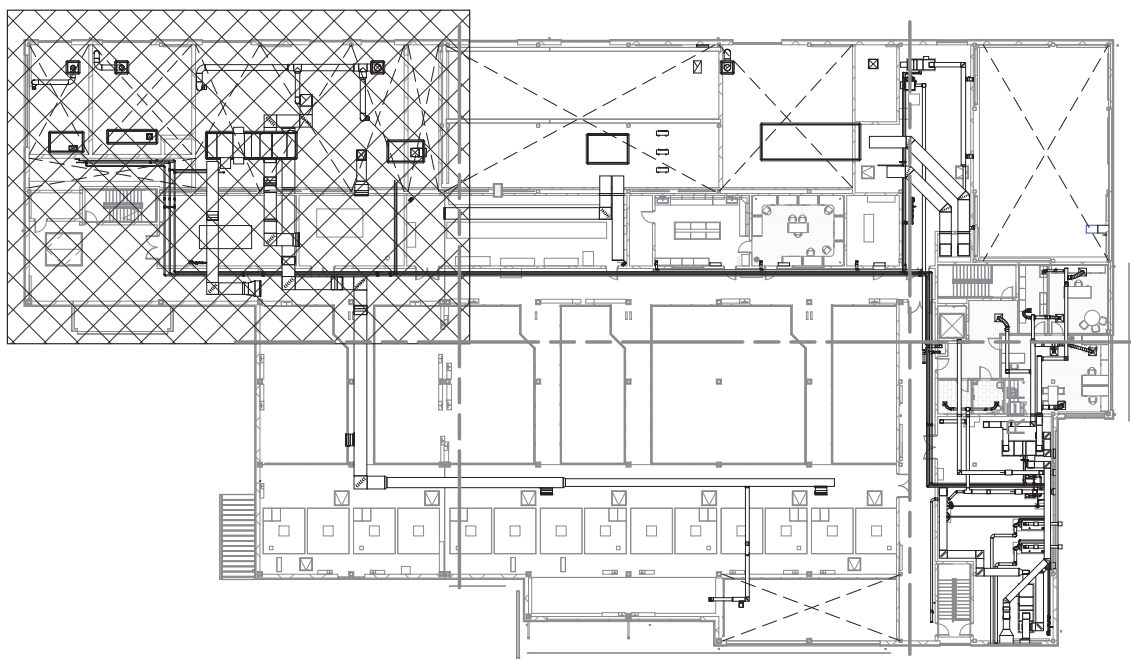
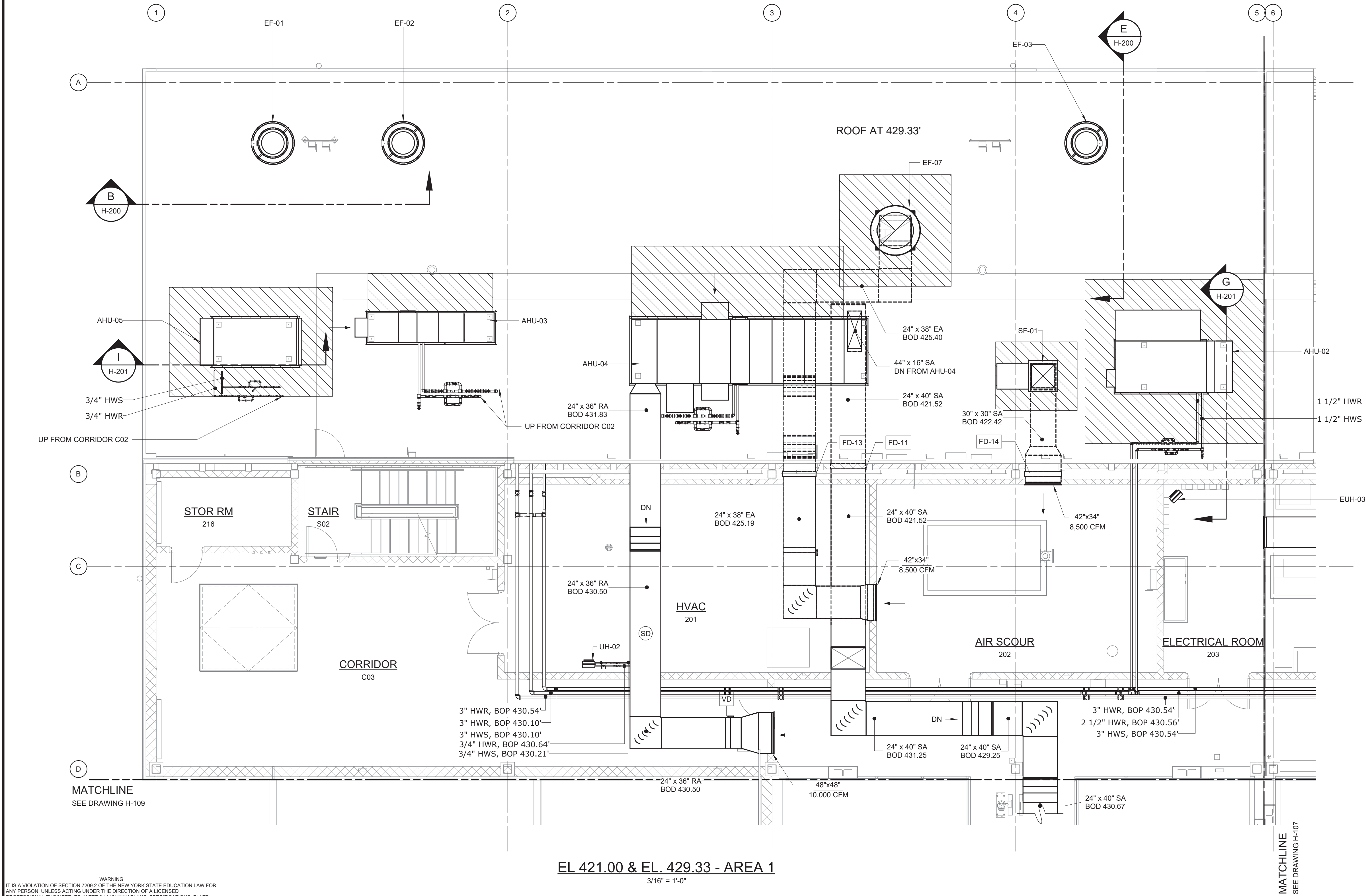
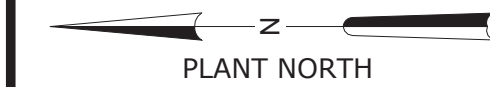
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-104





Autodesk Docs/90388-000\_Rye\_Lake\_Filtration/90388-000-WFP-H-105  
2/18/2025 2:42:52 PM

- NOTES:
1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
  2. THE ROOF AREA AT EL. 429.33 IS DEPICTED BETWEEN COLUMN LINES 1 & 6 AND COLUMN LINES A & B.



KEY PLAN

NTS  
3/16" = 1'-0"

EL 421.00 & EL. 429.33 - AREA 1

3/16" = 1'-0"

WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



**Hazen**

HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

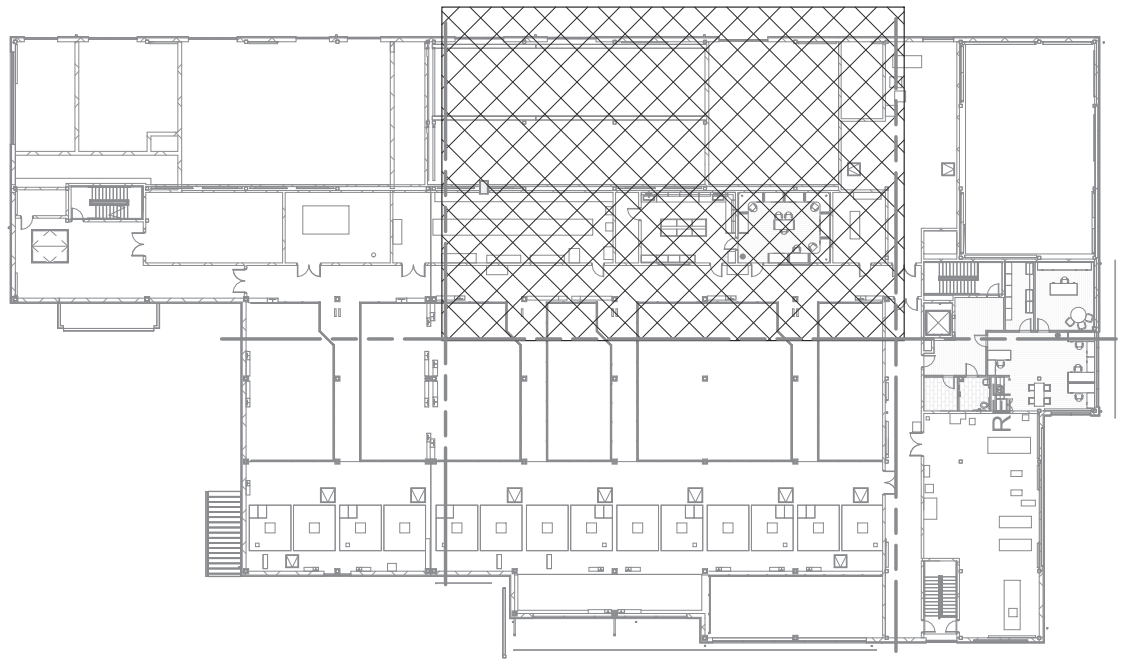
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 421.00 & EL. 429.33 - AREA 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-106



1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.
2. THE ROOF AREA AT EL. 429.33 IS DEPICTED BETWEEN COLUMN LINES 5 & 11 AND COLUMN LINES A & B.
3. CLEARANCE FOR MAINTENANCE ACCESS BEHIND DHU-01 IS BELOW RETURN AIR DUCT.
4. PROVIDE VARIABLE AREA MITERED ELBOW WITH TURNING VANES AT SIDE INLET TO UNIT.



KEY PLAN  
NTS


6 4 2 0 5'

$3/16" = 1'-0"$

WARNING

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[illegible]

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0      1/2"      1"</div>  </div>

# Hazen

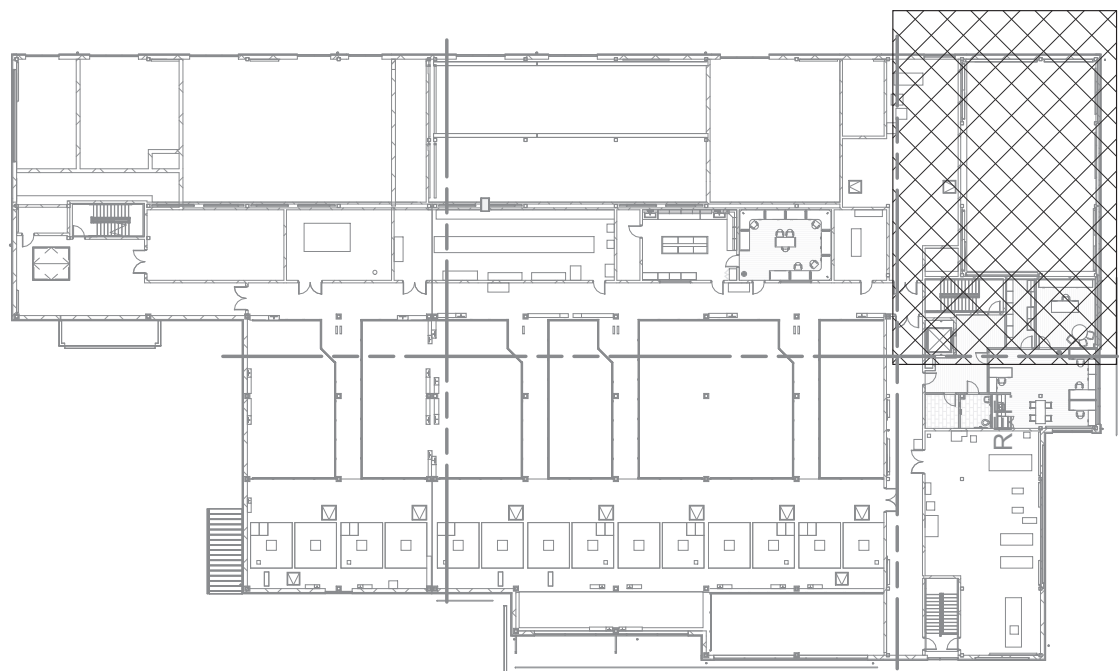
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY


FILTRATION PLANT  
HVAC  
EL. 421.00 & EL. 429.33 - AREA 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-107



$3/16" = 1'-0"$

[illegible]

				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	R. CHIN
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	<div> <div>0</div> <div>1/2"</div> <div>1"</div>  </div>
REV	ISSUED FOR	DATE	BY		

# Hazen

HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

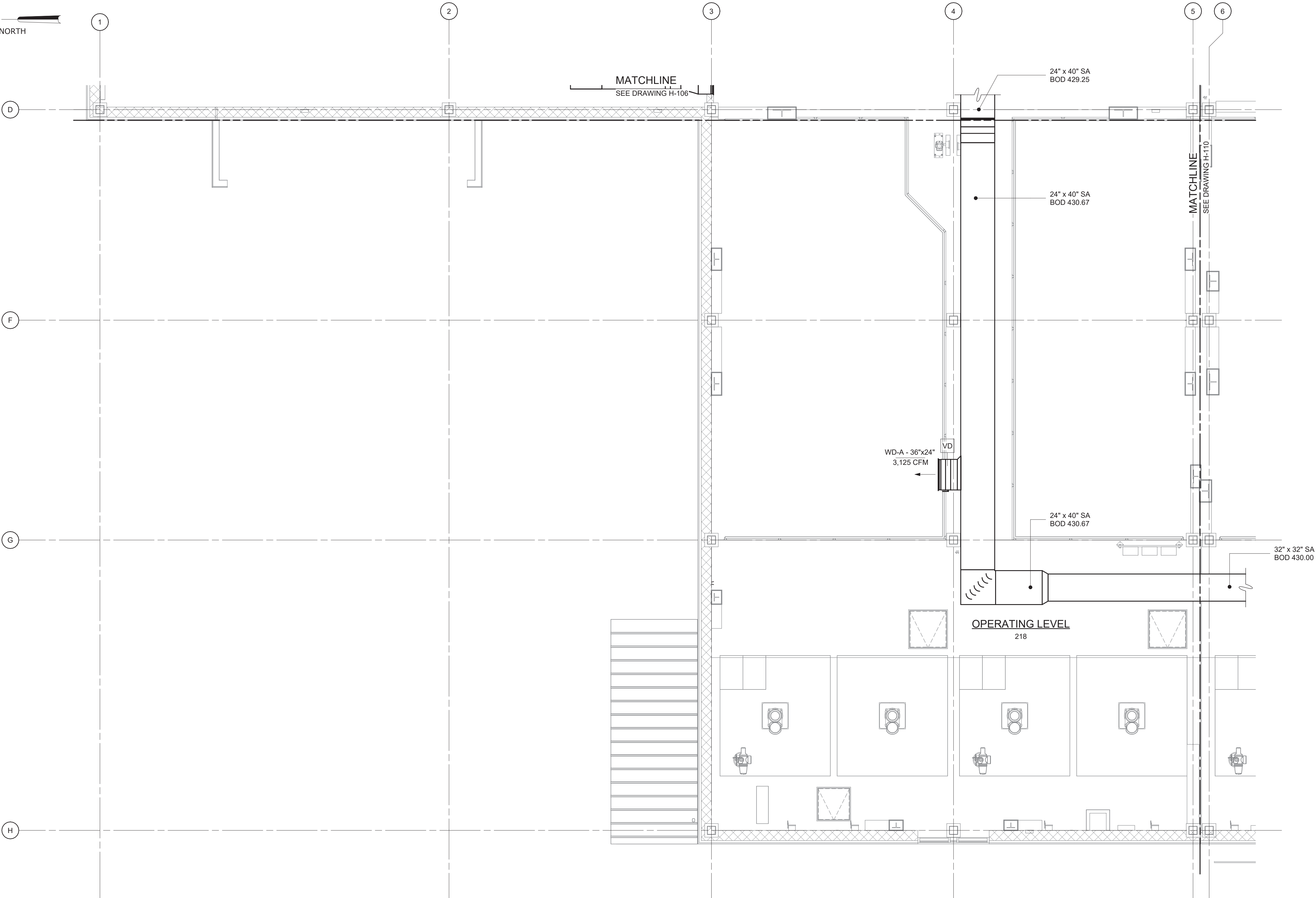
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

# RYE LAKE WATER FILTRATION PLANT HARRISON, NY

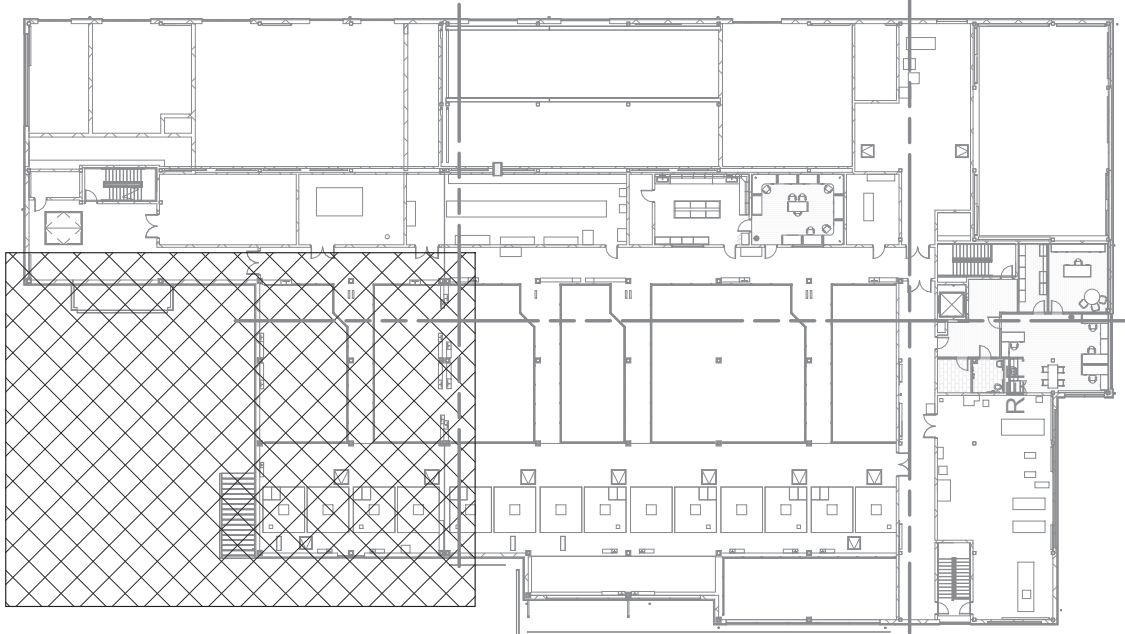
FILTRATION PLANT  
HVAC  
EL. 421.00 - AREA 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-108

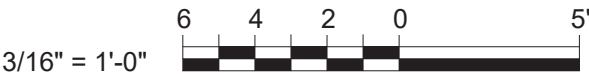




NOTES:  
1. THE WORK OF OTHER DISCIPLINES IS HALF-TONE OR HIDDEN FOR CLARITY. REFER TO CONTRACT DRAWINGS OF OTHER DISCIPLINES FOR ADDITIONAL WORK BY OTHERS.



KEY PLAN  
NTS



EL 421.00 - AREA 4  
3/16" = 1'-0"

WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1" 

BID SET

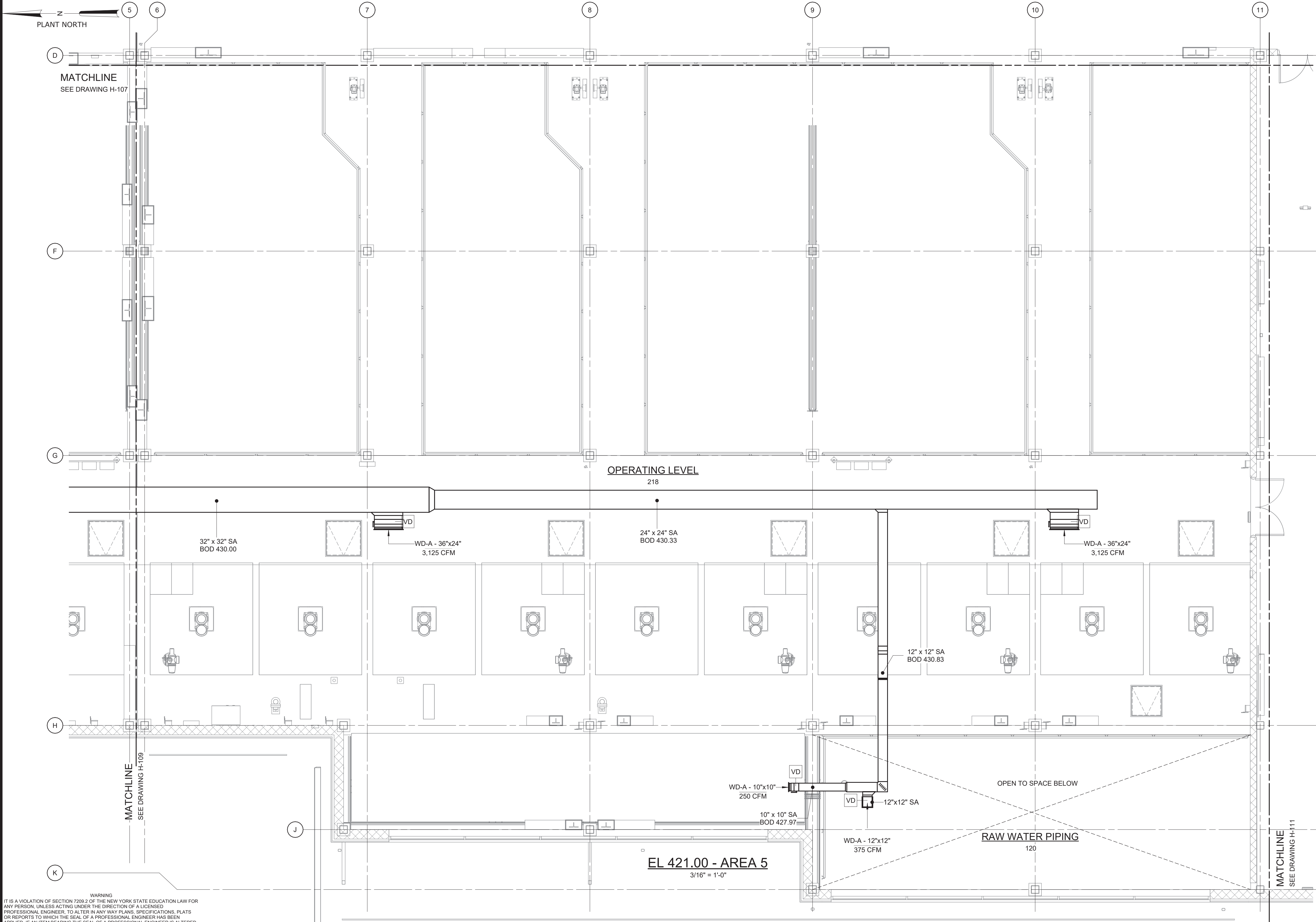


**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY  
  
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

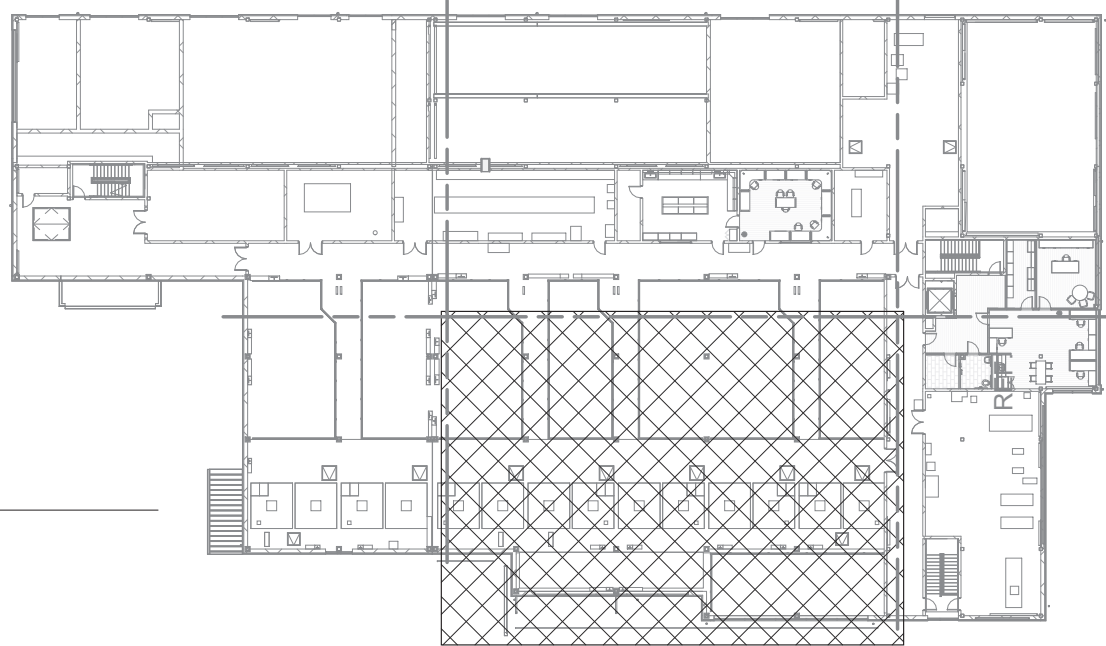
FILTRATION PLANT  
HVAC  
EL. 421.00 - AREA 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-109



NOTES:

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KEY PLAN  
NTS

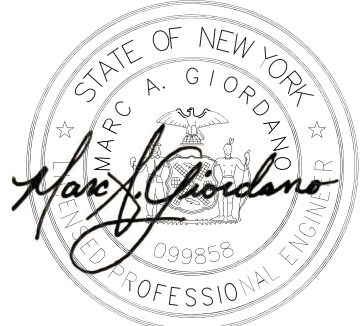
3/16" = 1'-0" 6 4 2 0 5'

WARNING  
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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

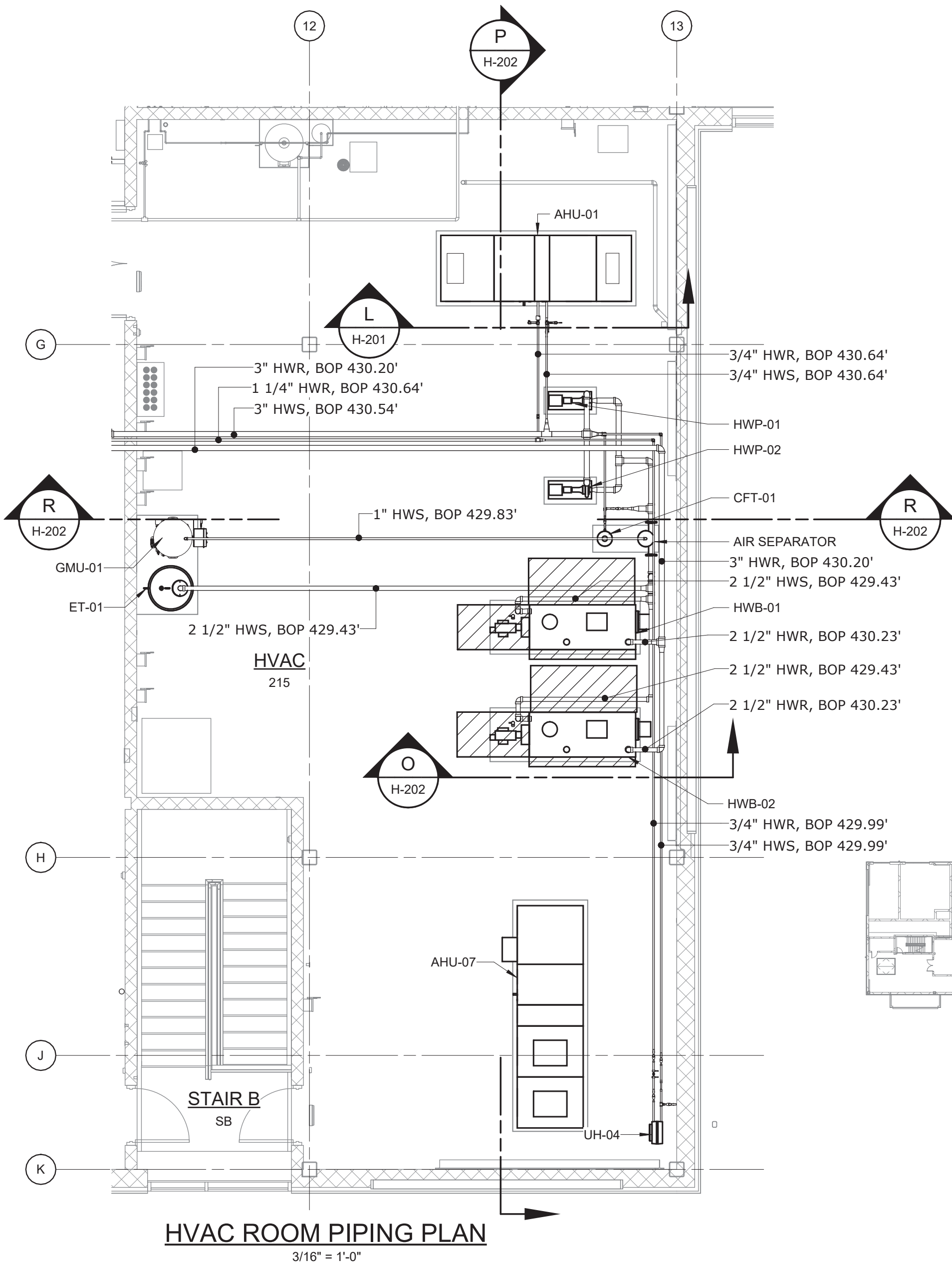
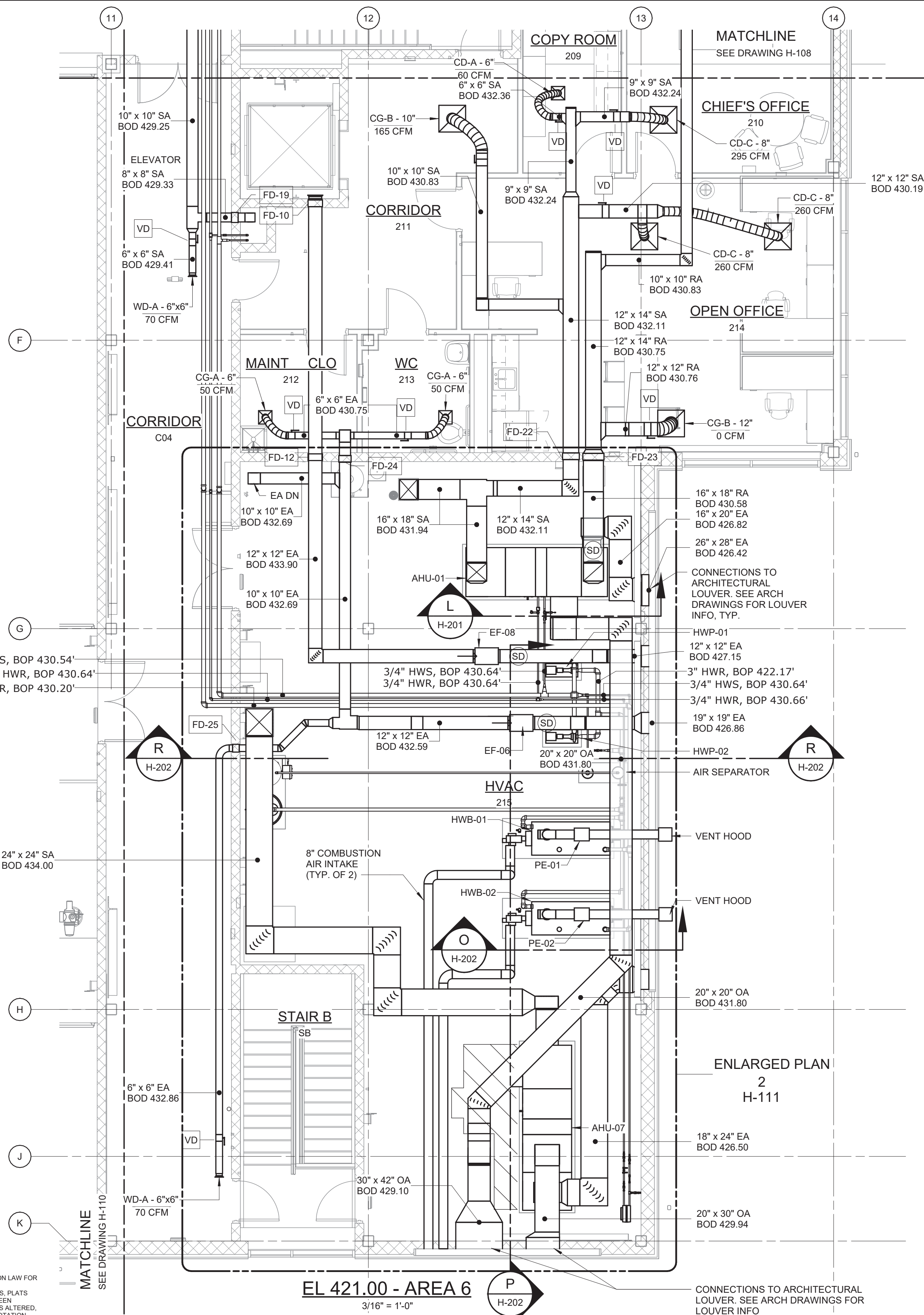
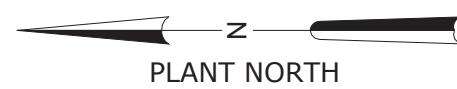
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 421.00 - AREA 5

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-110





NOTES:

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2. COORDINATE ALL CEILING DIFFUSERS WITH REFLECTED CEILING PLAN ON THE ARCHITECTURAL DRAWINGS.

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



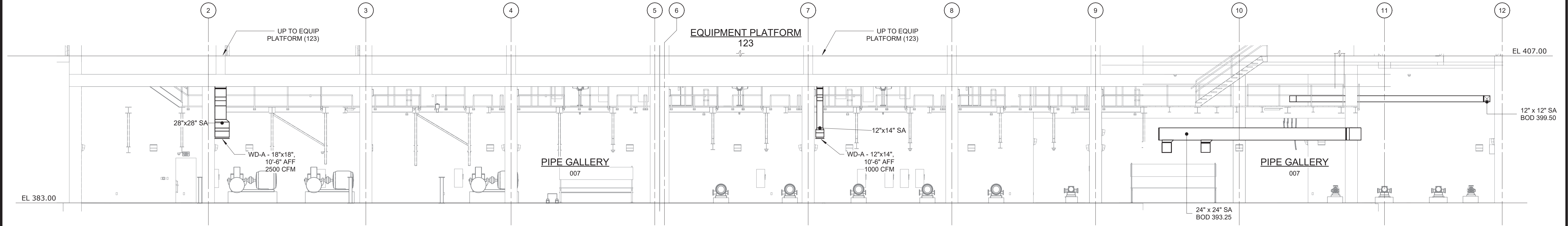
**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

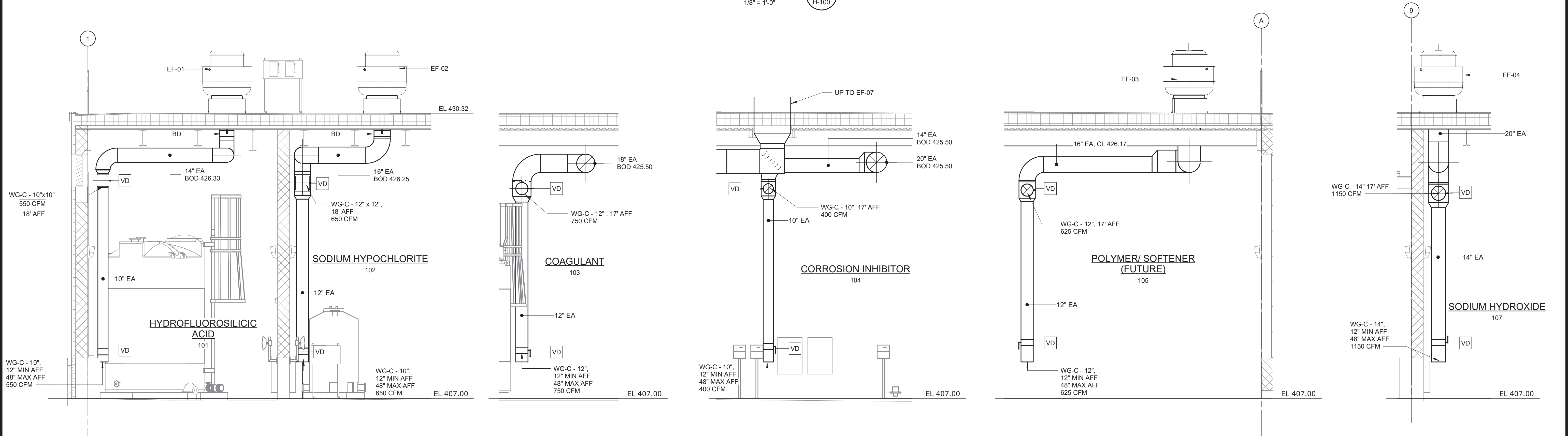
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
EL. 421.00 - AREA 6

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-111



SECTION A  
1/8" = 1'-0"



SECTION B  
1/4" = 1'-0"

SECTION C  
1/4" = 1'-0"

SECTION D  
1/4" = 1'-0"

SECTION E  
1/4" = 1'-0"

SECTION F  
1/4" = 1'-0"



WARNING  
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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: M. GIORDANO
				DRAWN BY: R. CHIN
				CHECKED BY: R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

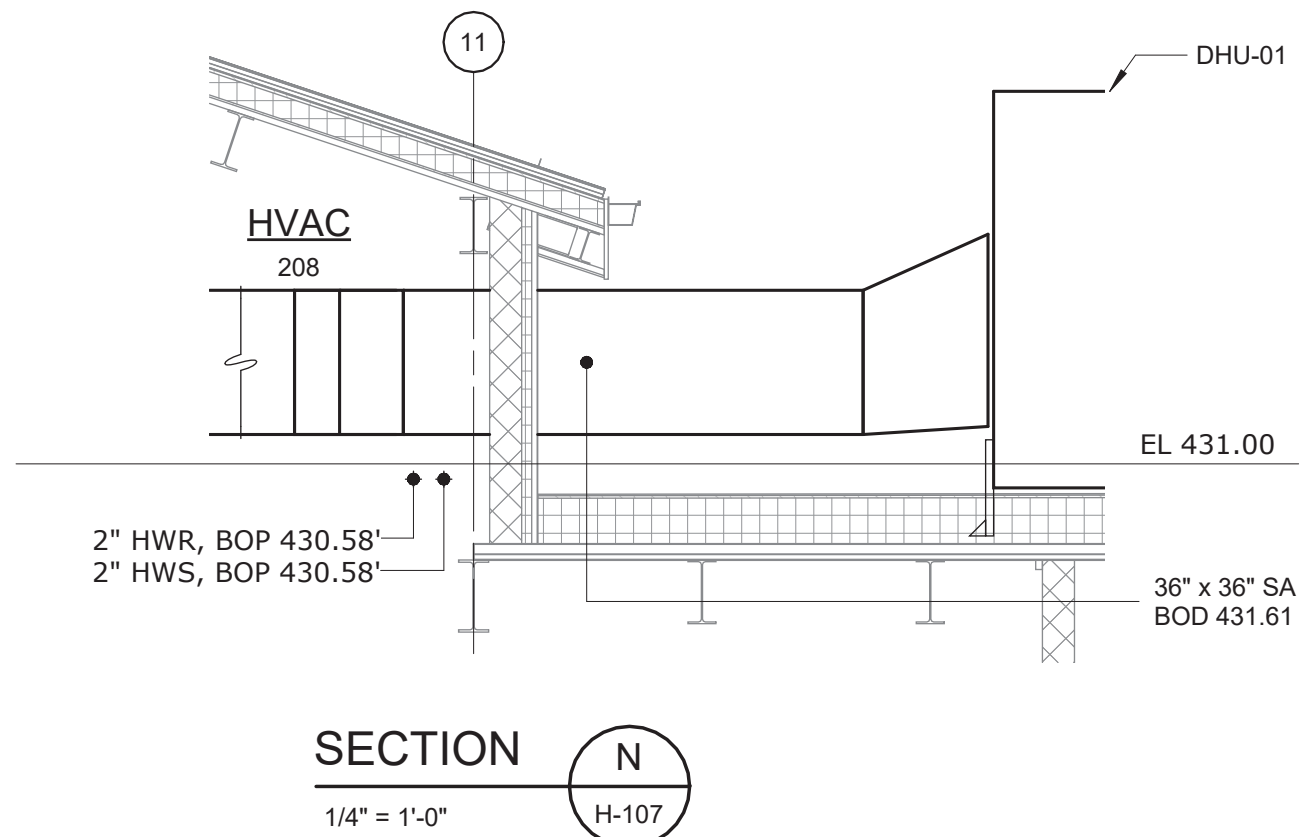
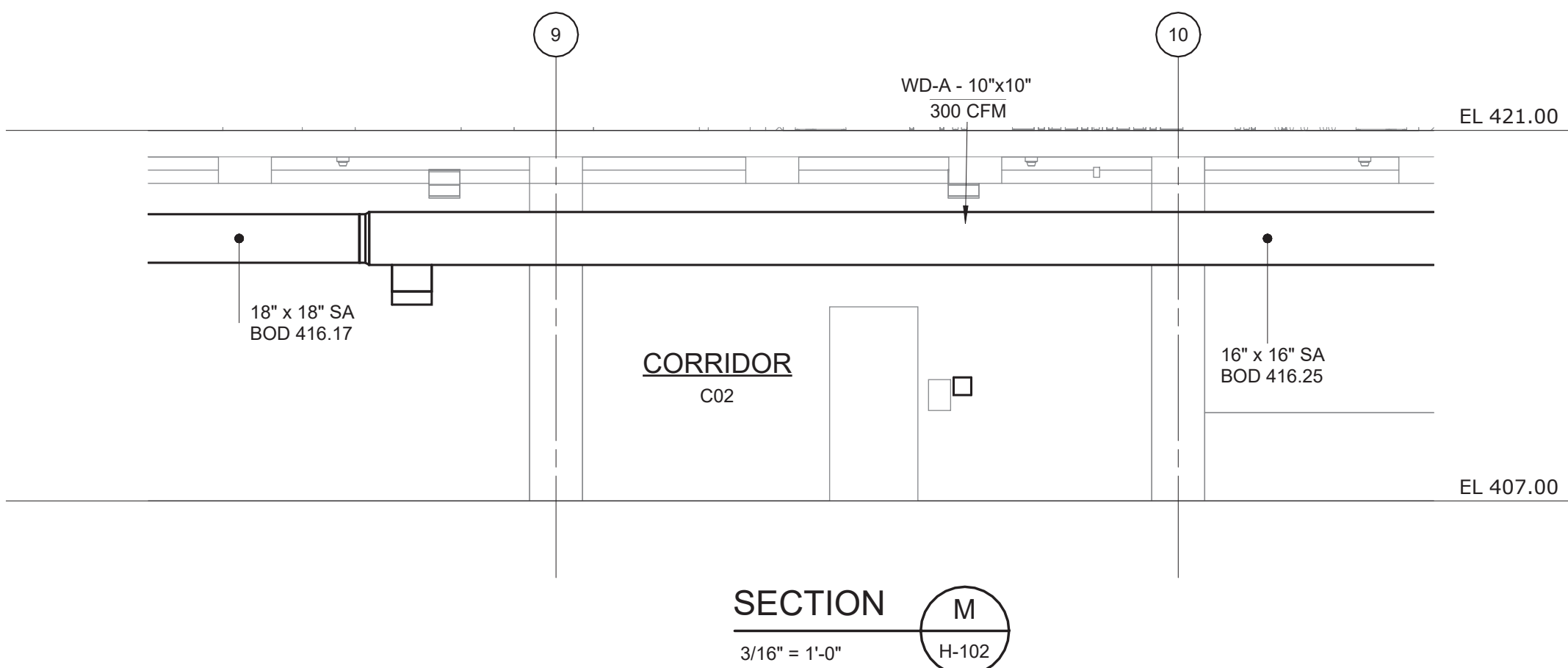
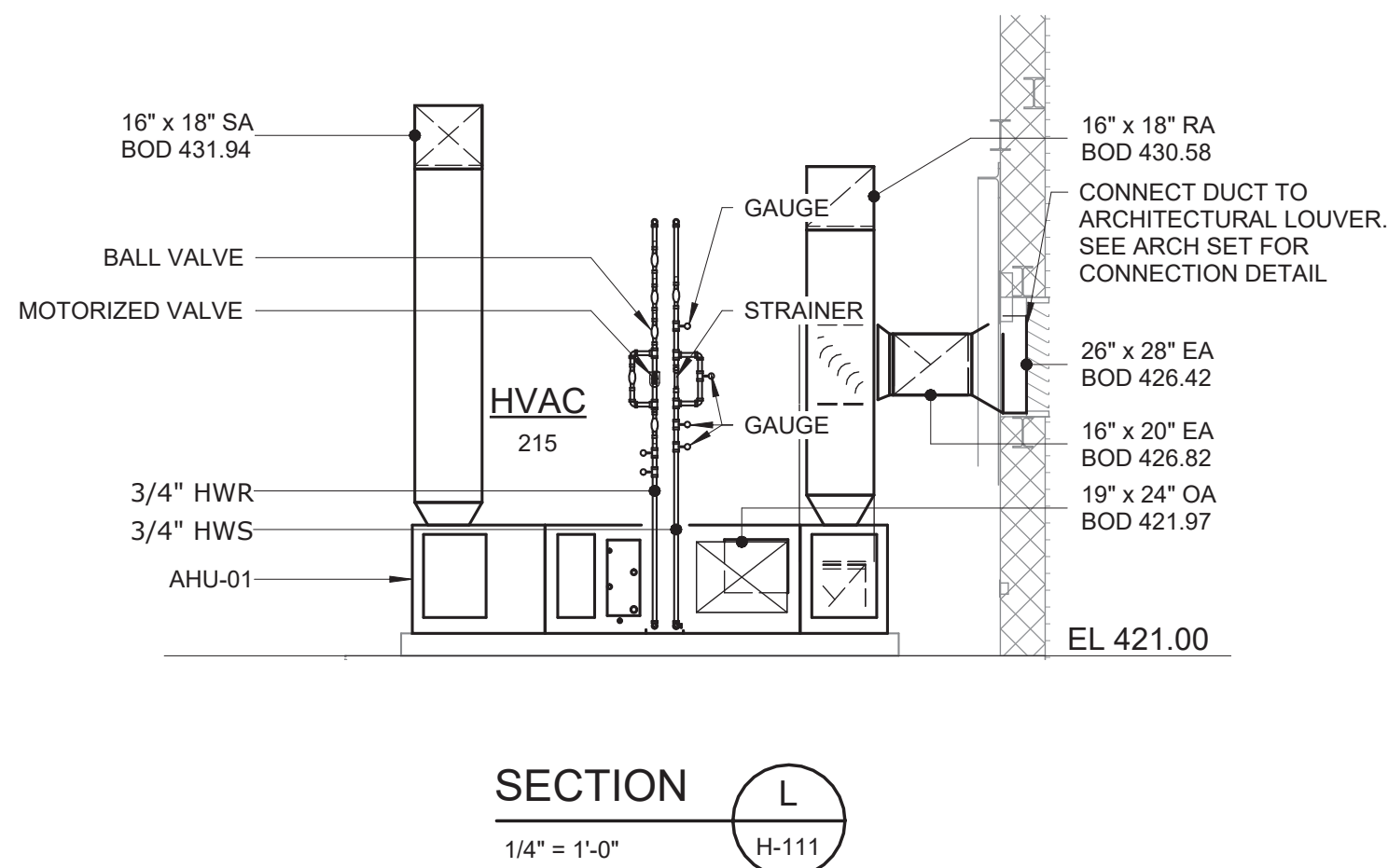
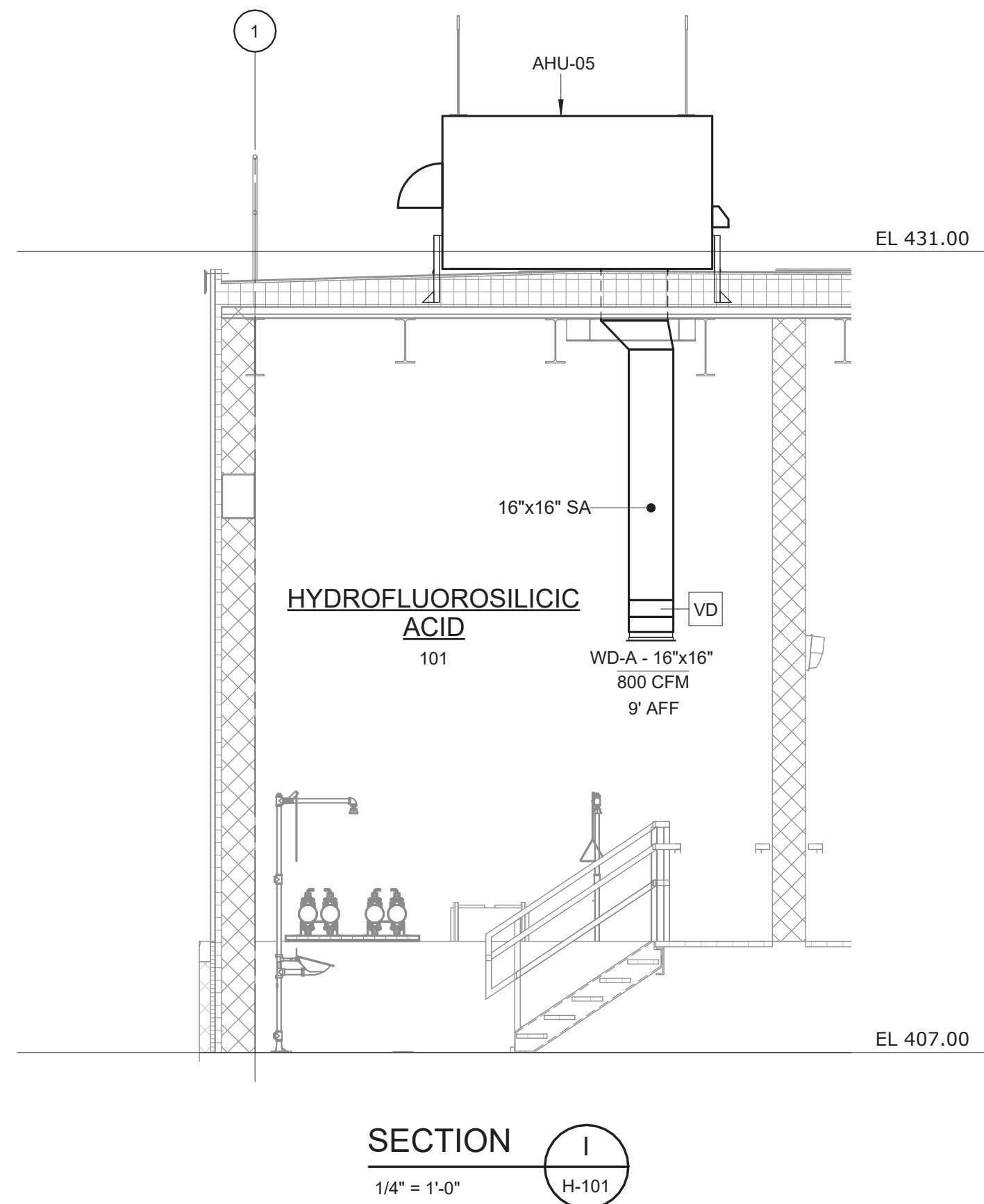
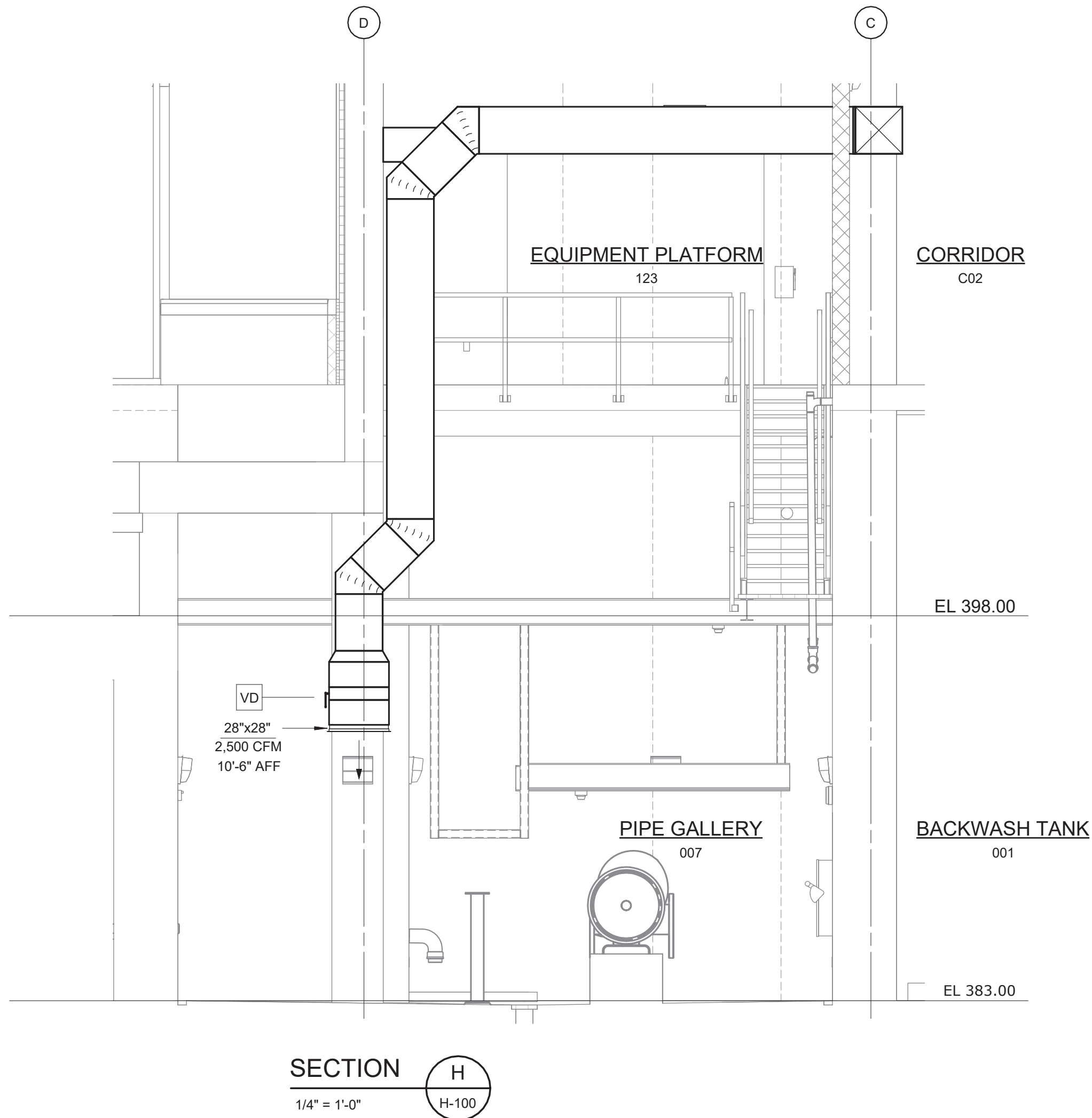
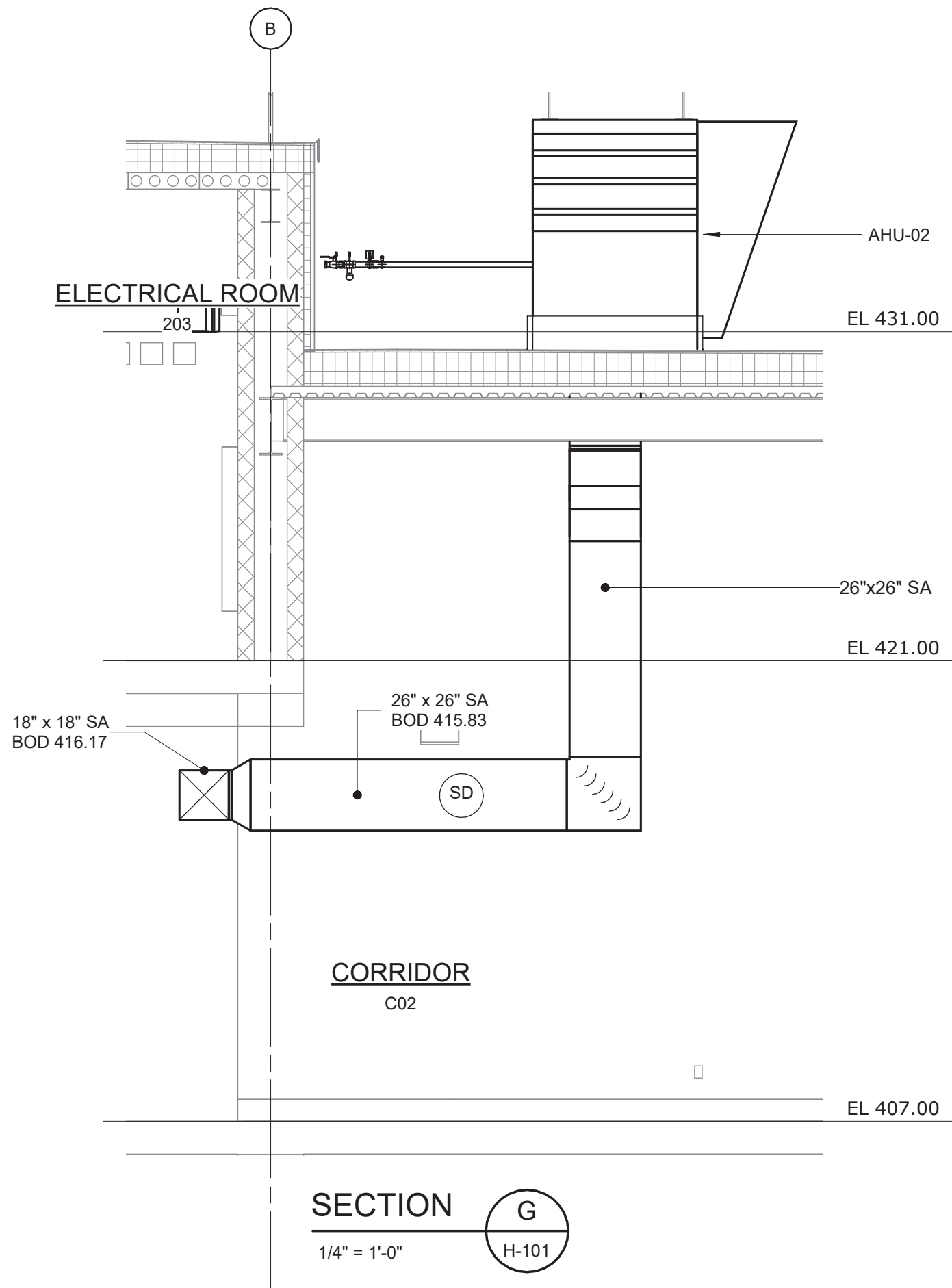
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
SECTIONS - SHEET 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-200





WARNING  
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REV	ISSUED FOR	DATE	BY	PROJECT ENGINEER: R. FROST
				DESIGNED BY: M. GIORDANO
				DRAWN BY: R. CHIN
				CHECKED BY: R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

BID SET

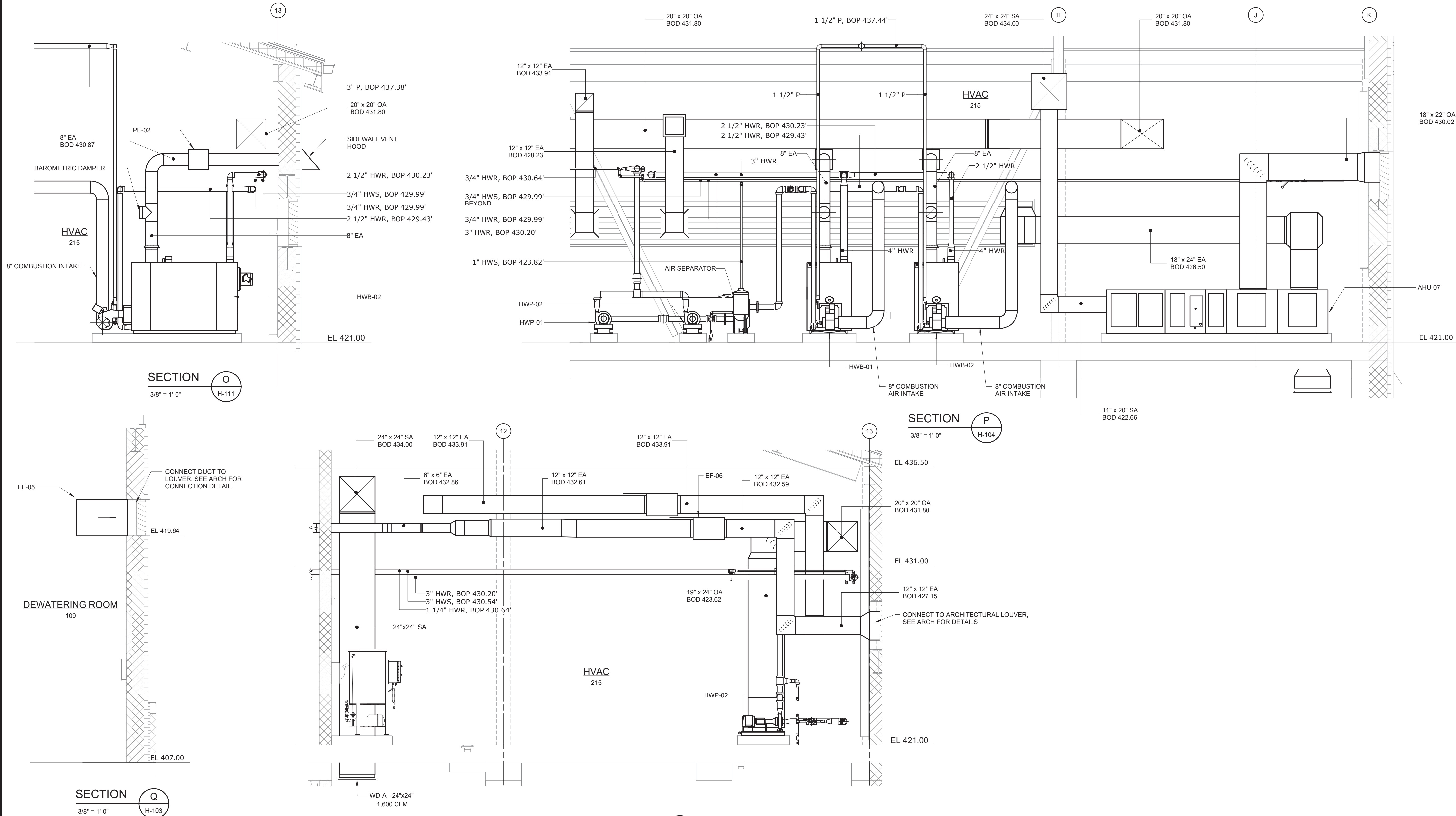


**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY  
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
SECTIONS - SHEET 2

DATE: FEB 2025  
HAZEN NO.: 90388-000  
CONTRACT NO.: A1364-A  
DRAWING NUMBER: H-201



WARNING  
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY  
  
RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
SECTIONS - SHEET 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-202



INDOOR DESIGN TEMPERATURES			
AREA NUMBER	AREA NAME	DESIGN DB TEMP (°F)	
		MINIMUM	MAXIMUM
001	BACKWASH TANK	UNCONDITIONED	
002	FILTERED WATER TRANSFER TANKS	UNCONDITIONED	
003	FLOATED SOLIDS BUFFER TANK	UNCONDITIONED	
004	UV DISINFECTION SYSTEM	50	104
005	RESIDUALS STORAGE TANKS	UNCONDITIONED	
006	STORAGE CLOSET	50	104
007	PIPE GALLERY	50	104
008	CORRIDOR	50	104
101	HYDROFLUOROSILICIC ACID	50	104
102	SODIUM HYPOCHLORITE (12.5%)	50	65
103	COAGULANT	50	104
104	CORROSION INHIBITOR	50	104
105	POLYMER/SOFTENER (FUTURE)	50	104
106	FILTERED WATER PUMPING AND DAF ROOM	50	104
107	SODIUM HYDROXIDE (25%)	50	104
108	CLOSET	50	104
109	DEWATERING ROOM	50	104
110	FIRE SPRINKLER RISER ROOM	50	104
111	CONFERENCE ROOM	68	72
112	LOBBY	68	72
113	VESTIBULE	65	80
114	MAINTENANCE CLOSET	50	104
115	WOMEN'S BATHROOM	68	72
116	WOMEN'S LOCKER ROOM	68	72
117	MEN'S BATHROOM	68	72
118	MEN'S LOCKER ROOM	68	72
119	ELECTRICAL	50	80
120	RAW WATER PIPING	50	104
121	STATIC MIXER AND OVERFLOW	UNCONDITIONED	
122	DAF TANKS	UNCONDITIONED	
123	EQUIPMENT PLATFORM	50	104
124	EXIT PASSAGEWAY	50	104
201	HVAC (NORTH)	50	104
202	AIR SCOUR	50	104
203	ELECTRICAL ROOM	50	80
204	STORAGE ROOM	50	104
205	PROCESS ANALYSIS ROOM	68	72
206	CONTROL ROOM	68	72
207	SCADA ROOM	68	72
208	HVAC (EAST)	50	104
209	COPY ROOM	68	72
210	CHIEF'S OFFICE	68	72
211	CORRIDOR	68	72
212	MAINTENANCE CLOSET	50	104
213	W.C.	68	72
214	OPEN OFFICE	68	72
215	HVAC (WEST)	50	104
216	STORAGE ROOM	50	104
217	HVAC PLENUM	UNCONDITIONED	
218	OPERATING LEVEL	50	104
SA	STAIR A	50	104
SB	STAIR B	50	104
SC	STAIR C	50	104
C01	CORRIDOR	50	104
C02	CORRIDOR	50	104
C03	CORRIDOR	68	72
C04	CORRIDOR	68	72

EXPANSION TANK SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	MAXIMUM DESIGN TEMPERATURE (°F)	MAXIMUM DESIGN PRESSURE (PSIG)	TANK VOLUME (GALLONS)	TYPE	MAXIMUM OPERATING TEMPERATURE (°F)	SYSTEM FLUID	WEIGHT (EMPTY)	NOTES
ET-01	HVAC (215)	AMTROL	400-L	240	125	106	BLADDER	200	25% PROPYLENE GLYCOL	343	1,2

- NOTES:  
1. REFER TO SPECIFICATION 23 21 14 FOR ADDITIONAL REQUIREMENTS.  
2. CONTRACTOR SHALL FIELD ADJUST THE EXPANSION TANK PRE-CHARGE TO 12 PSIG PRIOR TO INSTALLATION IN THE SYSTEM.

PROPANE VAPORIZER SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	CAPACITY		VAPORIZATION TYPE	INPUT (KW)	VOLTS/PHASE/HERTZ	NOTES
				BTU/HR	GPH				
PV-1	OUTDOORS	ALGAS	TORREXX - TX-50	2,200,000	25	INDIRECT DRY ELECTRIC	5.8	208/3/60	1,2

- NOTES:  
1. PROVIDE VALVE AND STRAINER PACKAGE INCLUDING STRAINER WITH MAGNETIC PLUG, INLET SHUTOFF VALVE, HYDROSTATIC RELIEF VALVE, OUTLET SHUTOFF BALL VALVE, AND OUTLET PRESSURE GAUGE.  
2. TORREX STAND - 12"  
3. ECONOMY VALVE  
4. DRAIN VALVE KIT  
5. LIQUID NET SOLENOID VALVE  
6. REFER TO SPECIFICATION 23 10 01 FOR CONSTRUCTION AND ACCESSORY DETAILS

DUCT CONSTRUCTION SCHEDULE

SYSTEM TYPE	AREA DESIGNATION SERVING	DUCTWORK LOCATION	DUCT MATERIAL	PRESSURE CLASS	SEAL CLASS	LEAKAGE CLASS
ALL	ALL	TYPE 1 CHEMICAL STORAGE/TRANSFER AREA	FRP	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
ALL	ALL (EXCEPT TYPE 1 OR 2 CHEMICAL STORAGE/TRANSFER AREA)	TYPE 2 CHEMICAL STORAGE/TRANSFER AREA	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
ALL	ALL (EXCEPT TYPE 1 OR 2 CHEMICAL STORAGE/TRANSFER AREA)	INDOOR WET PROCESS AREA	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
ALL	INDOOR DRY NON-PROCESS AREA	INDOOR DRY NON-PROCESS AREA	GALVANIZED STEEL	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
ALL	INDOOR WET PROCESS AREA	ALL (EXCEPT TYPE 1 OR 2 CHEMICAL STORAGE/TRANSFER AREA)	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
EXHAUST	TYPE 1 CHEMICAL STORAGE/TRANSFER AREA	ALL	FRP	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
SUPPLY	TYPE 1 CHEMICAL STORAGE/TRANSFER AREA	ALL (EXCEPT TYPE 1 OR 2 CHEMICAL STORAGE/TRANSFER AREA)	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
EXHAUST	TYPE 2 CHEMICAL STORAGE/TRANSFER AREA	(EXCEPT TYPE 1 CHEMICAL STORAGE/TRANSFER AREA)	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4
SUPPLY	TYPE 2 CHEMICAL STORAGE/TRANSFER AREA	ALL (EXCEPT TYPE 1 CHEMICAL STORAGE/TRANSFER AREA)	316SS	+ / - 2 INWG.	B	RECTANGULAR: 8 ROUND: 4

- NOTES:  
1. THIS SCHEDULE PROVIDES MINIMUM ACCEPTABLE MATERIAL, PRESSURE CLASS, SEAL CLASS, AND LEAKAGE CLASS REQUIREMENTS IF NO FURTHER GUIDANCE IS GIVEN IN THE DRAWINGS AND SPECIFICATIONS. ALTERNATE PROPERTIES MAY BE REQUIRED WHERE SPECIFICALLY IDENTIFIED IN THE DRAWINGS OR SPECIFICATIONS.  
2. REFER TO DRAWING G-005 FOR AREA/ROOM DESIGNATION TABLE.  
3. REFER TO SPECIFICATION 23 31 13 FOR ADDITIONAL REQUIREMENTS FOR METAL DUCTS AND DUCT ACCESSORIES.  
4. REFER TO SPECIFICATION 23 31 16 FOR ADDITIONAL REQUIREMENTS FOR NON-METAL DUCTS AND DUCT ACCESSORIES.

GLYCOL MAKEUP UNIT SCHEDULE

TAG	LOCATION	MANUFACTURER		STORAGE TANK SIZE (GAL)	MOTOR HP	FLUID	POWER			NOTES
		MAKE	MODEL				VOLT	PH	HZ	
GMU-01	HVAC ROOM (215)	BELL AND GOSSETT	GMU-60P	55	1/3	25% PROPYLENE GLYCOL	120	1	60	1

- NOTES:  
1. REFER TO SPECIFICATION 23 21 14 FOR CONSTRUCTION AND ACCESSORY DETAILS

CLIMATIC DESIGN INFORMATION

SOURCE	2017 ASHRAE HANDBOOK
STATION	WESTCHESTER COUNTY AIRPORT, N.Y.
DESIGN HEATING	9.2°F DB (99.6%)
DESIGN COOLING	89.6°F DB / 73.4°F MCWB (0.4%)
DESIGN DEHUMIDIFICATION	73.4°F DP/ 79.4°F MCDB (0.4%)

CHEMICAL FEED TANK SCHEDULE

TAG	LOCATION	MANUFACTURER		STORAGE TANK SIZE (GAL)	MATERIAL	WEIGHT (LBS)	NOTES
		MAKE	MODEL				
CF-01	HVAC ROOM (215)	WESSELS	CPFTA-5	5	CARBON STEEL	49	1

- NOTES:  
1. REFER TO SPECIFICATION 23 21 14 FOR CONSTRUCTION AND ACCESSORY DETAILS

AIR DEVICES - DIFFUSERS, REGISTERS, AND GRILLES SCHEDULE

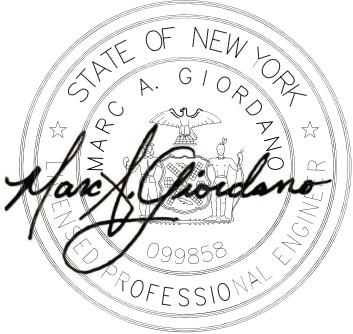
TAG	MANUFACTURER		NECK SIZE (IN)	FACE SIZE		MAX. PRESSURE DROP ("WG)	TYPE	MATERIAL	MOUNTING TYPE	NOTES
	MAKE	MODEL		W (IN)	H (IN)					
CD-A	TITUS	TMS-AA	SEE TAG	12	12	0.1	SUPPLY DIFFUSER	ALUMINUM	LAYIN	1
CD-B	TITUS	TMS-AA	SEE TAG	12	24	0.1	SUPPLY DIFFUSER	ALUMINUM	LAYIN	1
CD-C	TITUS	TMS-AA	SEE TAG	24	24	0.1	SUPPLY DIFFUSER	ALUMINUM	LAYIN	1
WD-A	TITUS	300FL	SEE TAG	SEE TAG	SEE TAG	0.1	SUPPLY DIFFUSER	ALUMINUM	SIDEWALL	1
CG-A	TITUS	350FL	SEE TAG	12	12	0.1	RETURN GRILLE	ALUMINUM	LAYIN	1
CG-B	TITUS	350FL	SEE TAG	24	24	0.1	RETURN GRILLE	ALUMINUM	LAYIN	1
WG-A	TITUS	350FL	SEE TAG	SEE TAG	SEE TAG	0.1	RETURN GRILLE	ALUMINUM	SIDEWALL	1
WG-C	-	-	-	-	-	-	OPEN DUCT INTAKE	-	-	2,3

- NOTES:  
1. REFER TO SPECIFICATION 23 31 13 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. REFER TO SPECIFICATION 23 31 16 FOR CONSTRUCTION AND ACCESSORY DETAILS  
3. FOR CHEMICAL ROOM EXHAUST INTAKES, EXPOSED EDGES OF PLAIN END OF DUCT SHALL BE FIELD-CAPPED WITH CORROSION BARRIER. CORROSION BARRIER SHALL BE THE SAME CORROSION BARRIER LAMINATE SEQUENCE AND MATERIALS INDICATED FOR THE DUCT INNER CORROSION BARRIER. THE EXTERIOR PORTION OF THE CAPPING SHALL BE FINISHED AS INDICATED FOR THE EXTERIOR FINISH OF THE DUCT.

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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	R. CHIN
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY		

BID SET



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WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
SCHEDULES - SHEET 1

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-600



AIR HANDLING UNIT SCHEDULE																																								
TAG	LOCATION	MANUFACTURER		AREA SERVED	AIR FLOW (CFM)	MIN. OA (CFM)	SUPPLY FAN				RETURN FAN			HEATING COIL								COOLING COIL								SYSTEM EFF.		WEIGHT		POWER						NOTES
							E.S.P. ("WG)	MOTOR			E.S.P. ("WG)	MOTOR			TYPE	EAT (°F)	LAT (°F)	CAPACITY (MBH)	WATER FLOW (GPM)	EWT (F)	LWT (F)	MAX. FACE VEL. (FPM)	EAT (°F)		LAT (°F)		MAX. FINS/INCH	MAX. FACE VEL. (FPM)	MAX. AIR P.D. ("WG)	CAPACITY (TOTAL) (MBH)	RATING	UNIT	(LBS)	VOLT	PH	HZ	MCA	MOCp		
		BHP	HP					VFD	BHP	HP		VFD	DB	WB									DB	WB	PH	HZ									MCA	MOCp				
AHU-01	HVAC (215)	TRANE	CSAA004	ADMIN & OCCUPIED AREAS	1,815	365	1	1.6	2	YES	1	0.6	1	YES	25% PG	57.9	95.5	70.6	7.3	200	180	575	77.9	65	53	52.2	8	510	0.79	64	14.8	IEER	1,650	460	3	60	6.35	15	1,2,5-8	
AHU-02	ROOF	TRANE	HORIZON OAK144	CHEMICAL ROOMS	6,050	6,050	1	2.7	5	YES	-	-	-	-	25% PG	7.7	60	341.7	34.1	200	180	875	-	-	-	-	-	-	-	-	-	3,023	460	3	60	8.9	15	1-8		
AHU-03	ROOF	TRANE	HORIZON OAB084	SODIUM HYPOCHLORITE (102)	1,200	1,200	1	0.4	1	YES	-	-	-	-	25% PG	7.7	60	67.8	6.8	200	180	400	90	75	54.5	53.6	14	200	0.2	82.9	14.8	IEER	1,395	460	3	60	40	60	1-8	
AHU-04	ROOF	TRANE	CSAA025	DAF/FILTER BASIN AREA	10,000	2,500	1	4.8	5	YES	0.5	3.2	5	YES	25% PG	39.4	69.4	325	32.4	200	180	405	-	-	-	-	-	-	-	-	-	5,820	460	3	60	40.25	60	1,2,5-8		
AHU-05	ROOF	TRANE	HORIZON OAB072	FLUORIDE (101)	800	800	1	0.2	1	YES	-	-	-	-	25% PG	7.7	60	45.2	4.5	200	180	261	-	-	-	-	-	-	-	-	-	1,177	460	3	60	3.5	15	1-8		
AHU-06	HVAC (208)	TRANE	BCHE018	ADMIN & OCCUPIED AREAS	585	585	1	0.37	1	YES	-	-	-	-	25% PG	7.7	71	40	4.1	200	180	527	90	75	55.08	53.55	-	527	0.5	40.2	14	SEER	119	460	3	60	1.63	15	1,2,5-8	
AHU-07	HVAC (215)	TRANE	CSAA004	ELECTRICAL ROOM (119)	1,600	0	2	1.37	2	YES	0.75	0.5	1	YES	-	-	-	-	-	-	-	-	80	67	59	57.6	10	354	0.5	48	14	SEER	1,658	460	3	60	6.35	15	1,2,5-8	
AHU-08	ROOF	TRANE	PRECEDENT TSK 150A4S0	ELECTRICAL ROOM (203)	5,000	0	1	2.5	4.6	YES	-	-	-	-	-	-	-	-	-	-	-	80	67	57.4	56.6	-	-	-	150	14.6	IEER	1,398	460	3	60	33	45	1-8		
AHU-09	HVAC (208)	TRANE	CSAA003	DEWATERING ROOM	1,250	1,250	2	1.2	1.5	YES	-	-	-	-	25% PG	7.7	72.4	87.7	9	200	180	500	-	-	-	-	-	-	-	-	-	693	460	3	60	2.63	15	1,2,5-8		

NOTES:  
1. REFER TO 23 74 00 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. PROVIDE WIRED REMOTE THERMOSTAT  
3. PROVIDE ROOF CURB  
4. PROVIDE THROUGH THE BASE ELECTRICAL  
5. PROVIDE WITH HINGED ACCESS PANELS  
6. PROVIDE MERV 8 FILTERS  
7. PROVIDE WITH FROSTAT  
8. PROVIDE WITH STAINLESS STEEL DRAIN PAN

AIR CONDITIONING UNIT SCHEDULE																				
TAG	LOCATION	AREA SERVED	MANUFACTURER		TYPE	AIR FLOW (CFM)	COOLING COIL			MIN. SYSTEM EER	MIN. CIRCUITS	WEIGHT (LBS)	SYSTEM EFF.		POWER				NOTES	
			MAKE	MODEL			EAT (F) DB	CAPACITY					RATING	UNIT	VOLT	PH	HZ	MCA		MOCp
								NOMINAL (TONS)	ACTUAL (MBH)											
AC-01	PROCESS ANALYSIS ROOM (205)	PROCESS ANALYSIS ROOM (205)	mitsubishi	PKA-A18HA7	WALL MOUNTED	370	72	1.5	18	14.4	1	46	18.5	SEER	AC POWERED FROM CONDENSING UNIT INTERCONNECTING WIRING				1-3	
AC-02	CONTROL ROOM (206)	CONTROL ROOM (206)	mitsubishi	PKA-A18HA7	WALL MOUNTED	370	72	1.5	18	14.4	1	46	18.5	SEER	AC POWERED FROM CONDENSING UNIT INTERCONNECTING WIRING				1-3	
AC-03	SCADA ROOM (207)	SCADA ROOM (207)	mitsubishi	PKA-A18HA7	WALL MOUNTED	370	72	1.5	18	14.4	1	46	18.5	SEER	AC POWERED FROM CONDENSING UNIT INTERCONNECTING WIRING				1-3	

NOTES:  
1. REFER TO SPECIFICATION 23 81 26 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. PROVIDE WIRED REMOTE THERMOSTAT  
3. ATC CONTRACTOR TO PROVIDE INTERCONNECTING WIRING

AIR COOLED CONDENSING UNIT SCHEDULE																	
TAG	LOCATION	AREA SERVED	MANUFACTURER		NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	REFRIGERANT	AMBIENT TEMP.		COMPRESSOR TYPE	ASSOCIATED UNIT	POWER					NOTES
			MAKE	MODEL				MIN.	MAX.			VOLT	PH	HZ	MCA	MOCp	
ACCU-01	ROOF	PROCESS ANALYSIS ROOM (205)	mitsubishi	PUZ-A18NKA7	18	11.3	R410A	12	115	INVERTER-DRIVEN TWIN ROTARY	AC-01	208	1	60	11	28	1
ACCU-02	ROOF	CONTROL ROOM (206)	mitsubishi	PUZ-A18NKA7	18	11.3	R410A	12	115	INVERTER-DRIVEN TWIN ROTARY	AC-02	208	1	60	11	28	1
ACCU-03	ROOF	SCADA ROOM (207)	mitsubishi	PUZ-A18NKA7	18	11.3	R410A	12	115	INVERTER-DRIVEN TWIN ROTARY	AC-03	208	1	60	11	28	1
ACCU-04	ROOF	ELECTRICAL ROOM (119)	TRANE	5TTA4048A3000A	48	-	R454B	55	115	SCROLL	AHU-07	208	3	60	16	25	1
ACCU-05	ROOF	ADMIN SPACES	TRANE	TTA072K4AA	72	-	R454B	55	115	SCROLL	AHU-01	460	3	60	16	25	1
ACCU-06	ROOF	ADMIN SPACES	TRANE	5TTA4048A3000A	48	-	R454B	55	115	SCROLL	AHU-06	208	3	60	16	25	1
ACCU-07	ROOF	PIPE GALLERY, EQUIPMENT PLATFORM, DAF AND FILTER ROOM	BRY-AIR OR MUNTERS	BY MANUF.	10	-	R454B	40	115	SCROLL	DHU-01	460	3	60	22	25	1

NOTES:  
1. REFER TO SPECIFICATION 23 81 26 FOR CONSTRUCTION AND ACCESSORY DETAILS

HOT WATER BOILER SCHEDULE															
TAG	LOCATION	MANUFACTURER AND MODEL		TYPE	RATED CAPACITY OUTPUT (BTU/HR)	NET INPUT (BTU/HR)	THERMAL	FUEL	WATER TEMPERATURE OUT (°F)	WATER TEMPERATURE DROP (°F)	WATER FLOW RATE (GPM)	GAS INLET PRESSURE RANGE (IN. WC)	BURNER ELECTRICAL DATA		NOTES
		EFFECIENCY %	BOILER				BURNER						MOTOR HP	VOLT/PHASE/HZ	
HWB-01	HVAC ROOM (215)	WEIL MCCLAIN - 780	POWER FLAME - WCR1-G-12	CAST IRON	753	935	80	PROPANE	200	20	70	4.6 - 14	1/2	120/1/60	1-2
HWB-02	HVAC ROOM (215)	WEIL MCCLAIN - 780	POWER FLAME - WCR1-G-12	CAST IRON	753	935	80	PROPANE	200	20	70	4.6 - 14	1/2	120/1/60	1-2

NOTES:  
1. REFER TO SPECIFICATION 23 52 23 FOR CONSTRUCTION AND ACCESSORY DETAILS  
2. BOILERS TO OPERATE IN LEAD/LAG CONFIGURATION. EACH BOILER IS SIZED FOR 50% OF THE TOTAL DESIGN HEATING LOAD.

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FAN SCHEDULE

TAG	LOCATION	AREA SERVED	MANUFACTURER	MODEL	AIRFLOW (CFM)	E.S.P. ("WG)	FAN		MOTOR		POWER			NOTES
							TYPE	DRIVE	BHP	HP	VOLT	PH	HZ	
EF-01	ROOF	FLUORIDE ROOM (101)	HARTZELL	A88-0-151FE100FGFCD3	900	0.65	CENTRIFUGAL UPBLAST	BELT	0.20	1/4	208	3	60	1-4
EF-02	ROOF	SODIUM HYPOCHLORITE (102)	HARTZELL	A88-0-181-FE-66FGFCD3	1,300	0.65	CENTRIFUGAL UPBLAST	BELT	0.23	1/4	208	3	60	1-4
EF-03	ROOF	CHEMICAL AREAS	HARTZELL	A88-0-301-FE100FGFCF3	3,650	0.5	CENTRIFUGAL UPBLAST	BELT	0.47	1/2	208	3	60	1-4
EF-04	ROOF	SODIUM HYDROXIDE (109)	HARTZELL	A88-0-181-FE100FGFCF3	2,300	0.5	CENTRIFUGAL UPBLAST	BELT	0.36	1/2	208	3	60	1-4
EF-05	DEWATERING ROOM (109)	DEWATERING ROOM (110)	GREENHECK	SE1-16-436-VG	1,200	0.5	SIDEWALL PROPELLER	DIRECT	0.33	3/4	115	1	60	1,3
EF-06	HVAC (215)	ADMIN AREAS	GREENHECK	SQ-99	585	0.75	INLINE CENTRIFUGAL	DIRECT	0.22	1/2	115	1	60	1,3
EF-07	ROOF	AIR SCOUR (202)	GREENHECK	CUBE-360-VG	8,500	0.5	CENTRIFUGAL UPBLAST	BELT	1.33	2	460	3	60	1-4
EF-08	HVAC (215)	ELEVATOR SHAFT	GREENHECK	SQ-97-VG	140	0.75	ALUMINUM INLINE	DIRECT	0.12	1/4	115	1	60	1,3
SF-01	ROOF	AIR SCOUR (202)	GREENHECK	KSQ-22-M2-VG	8,500	0.5	ROOF SUPPLY FAN	DIRECT	2.9	7.5	460	3	60	1,2,4

- NOTES:
- REFER TO SPECIFICATION 23 34 00 FOR CONSTRUCTION AND ACCESSORY DETAILS
  - PROVIDE WITH PREFABRICATED ROOF CURB
  - PROVIDE WITH GRAVITY BACKDRAFT DAMPER
  - PROVIDE WITH CONTINUOUS BIRD SCREEN

PUMP SCHEDULE

TAG	LOCATION	MANUFACTURER		TYPE	FLUID	FLOW RATE (GPM)	HEAD (FT)	SHUT OFF HEAD (FT)	MIN. NPSH REQ'D (FT)	MIN. EFF. (%)	MOTOR				POWER			NOTES
		MAKE	MODEL								BHP	HP	RPM	VFD	VOLT	PH	HZ	
HWP-01	HVAC ROOM (215)	BELL AND GOSSETT	E-1510 - 1.5BC	CENTRIFUGAL END SUCTION	25% PROPYLENE GLYCOL	126	80	92.8	7.74	60	4.71	5	1800	YES	460	3	60	1
HWP-02	HVAC ROOM (215)	BELL AND GOSSETT	E-1510 - 1.5BC	CENTRIFUGAL END SUCTION	25% PROPYLENE GLYCOL	126	80	92.8	7.74	60	4.71	5	1800	YES	460	3	60	1

- NOTES:
- REFER TO SPECIFICATION 23 21 23 FOR CONSTRUCTION AND ACCESSORY DETAILS

HOT WATER UNIT HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER		TYPE	AIRFLOW (CFM)	CAPACITY (MBH)	WATER FLOW	EWT (°F)	LWT (°F)	WATER P.D.	POWER					NOTES
		MAKE	MODEL								VOLT	PH	HZ	MCA	MOCP	
UH-01	FIRE SPRINKLER RISER ROOM (111)	TRANE	UHSBA008	HORIZONTAL	245	8.03	0.8	200	180	0.8	115	1	60	1	1.8	1
UH-02	HVAC ROOM (201)	TRANE	UHSBA008	HORIZONTAL	245	8.03	0.8	200	180	0.8	115	1	60	1	1.8	1
UH-03	HVAC ROOM (208)	TRANE	UHSBA008	HORIZONTAL	245	8.03	0.8	200	180	0.8	115	1	60	1	1.8	1
UH-04	HVAC ROOM (215)	TRANE	UHSBA008	HORIZONTAL	245	8.03	0.8	200	180	0.8	115	1	60	1	1.8	1

- NOTES:
- REFER TO SPECIFICATION 23 82 39 FOR CONSTRUCTION AND ACCESSORY DETAILS

ELECTRIC UNIT HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER		TYPE	CAPACITY (KW)	AIRFLOW (CFM)	DIMENSIONS			WEIGHT (LBS)	POWER			NOTES
		MAKE	MODEL				WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)		VOLT	PH	HZ	
EUH-01	ELECTRICAL (119)	INDEECO	UHIR	VERTICAL	5	350	13	18	8	25	208	1	60	1
EUH-02	ELECTRICAL (119)	INDEECO	UHIR	VERTICAL	5	350	13	18	8	25	208	1	60	1
EUH-03	ELECTRICAL (203)	INDEECO	UHIR	VERTICAL	5	350	13	18	8	25	208	1	60	1
EUH-04	ELECTRICAL (203)	INDEECO	UHIR	VERTICAL	5	350	13	18	8	25	208	1	60	1

- NOTES:
- REFER TO SPECIFICATION 23 82 39 FOR CONSTRUCTION AND ACCESSORY DETAILS

POWER EXHAUSTER SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	FAN		MOTOR		POWER			NOTES
				TYPE	DRIVE	BHP	HP	VOLT	PH	HZ	
PE-01	HVAC (215)	FIELD CONTROLS	PVE-1200	INLINE CENTRIFUGAL	BELT	0.1	1/4	115	1	60	1-4
PE-02	HVAC (215)	FIELD CONTROLS	PVE-1200	INLINE CENTRIFUGAL	BELT	0.1	1/4	115	1	60	1-4

- NOTES:
- PROVIDE WITH 4" MG-1 DRAFT CONTROL DAMPER
  - PROVIDE WITH 4" VENT HOOD
  - PROVIDE WITH SPILL SWITCH
  - PROVIDE WITH CK KIT

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				PROJECT ENGINEER:	R. FROST
				DESIGNED BY:	M. GIORDANO
				DRAWN BY:	R. CHIN
				CHECKED BY:	R. VAN DYKE
				IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0    1/2"    1" 
REV	ISSUED FOR	DATE	BY		

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
SCHEDULES - SHEET 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-602

DEHUMIDIFICATION UNIT SCHEDULE - PART 1

TAG	LOCATION	MANUFACTURER		AREA SERVED	OUTSIDE AIR (CFM)	SUPPLY FAN				SUMMER CONDITIONS: DRYING WITH DX PRE-COOL COIL ONLY					SUMMER CONDITIONS: DRYING WITH DESICCANT ONLY					SPRING CONDITIONS: DRYING WITH DESICCANT ONLY					WINTER CONDITIONS: HEATING ONLY					POWER						WEIGHT (LBS)	NOTES
		MANUFACTURER	MODEL			AIR FLOW (CFM)	ESP (IN.WG)	BHP	MOTOR HP	OUTSIDE AIR DP TEMP (°F)	OUTSIDE AIR DB TEMP (°F)	SUPPLY AIR DP TEMP (°F)	SUPPLY AIR DB TEMP (°F)	SPACE TARGET DP TEMP2 (°F)	OUTSIDE AIR DP TEMP (°F)	OUTSIDE AIR DB TEMP (°F)	SUPPLY AIR DP TEMP (°F)	SUPPLY AIR DB TEMP (°F)	SPACE TARGET DP TEMP2 (°F)	OUTSIDE AIR DP TEMP (°F)	OUTSIDE AIR DB TEMP (°F)	SUPPLY AIR DP TEMP (°F)	SUPPLY AIR DB TEMP (°F)	SPACE TARGET DP TEMP (°F)	OUTSIDE AIR DP TEMP (°F)	OUTSIDE AIR DB TEMP (°F)	SUPPLY AIR DP TEMP (°F)	SUPPLY AIR DB TEMP (°F)	SPACE TARGET DP TEMP (°F)	VOLT	PH	HZ	FLA	MCA	MOCp		
DHU-01	ROOF	BRYAIR OR MUNTERS	VFB SERIES OR ICA SERIES	PIPE GALLERY & FILTERED WATER PUMPING AND DAF ROOM	900	10,000	1.7	10.3	15	73.5	79.4	55	< 95	56	73.5	79.4	52.6	< 95	53.6	45.0	50	35.4	< 95	36.4	-	9	-	65	50	460	3	60	138	146	150	8,500	1-4

DEHUMIDIFICATION UNIT SCHEDULE - PART 2

TAG	OUTDOOR AIR PRE-COOLING DX COIL1							POST-HEATING COIL							DESICCANT REACTIVATION SYSTEM						WHEEL: SUMMER DESICCANT-ONLY PERFORMANCE							WHEEL: SPRING DESICCANT-ONLY PERFORMANCE						
	AIR FLOW  (CFM)	ENTERING AIR		LEAVING AIR		TOTAL COOLING LOAD  (MBH)	SENSIBLE COOLING LOAD  (MBH)	AIR FLOW  (CFM)	ENTERING AIR DB TEMP  (°F)	LEAVING AIR DB TEMP  (°F)	HEATING LOAD  (MBH)	FLUID	ENTERING FLUID TEMP  (°F)	FLUID FLOW  (GPM)	FAN			ENTERING AIR DB TEMP  (°F)	LEAVING AIR DB TEMP3  (°F)	ELECTRIC HEAT3  (KW)	AIR FLOW THROUGH WHEEL4  (CFM)	AIR FLOW BYPASSING WHEEL4  (CFM)	ENTERING AIR		SUPPLY AIR DP TEMP4  (°F)	SUPPLY AIR DB TEMP4.5  (°F)	MOISTURE REMOVAL  (GR/HR)	AIR FLOW THROUGH WHEEL  (CFM)	AIR FLOW BYPASSING WHEEL  (CFM)	ENTERING AIR		SUPPLY AIR DP TEMP  (°F)	SUPPLY AIR DB TEMP  (°F)	MOISTURE REMOVAL  (GR/HR)
		DP TEMP	DB TEMP	DP TEMP	DB TEMP										AIR FLOW3  (CFM)	ESP  (INWG)	MOTOR SIZE  (HP)						DP TEMP5  (°F)	DB TEMP5  (°F)						DP TEMP  (°F)	DB TEMP  (°F)			
DHU-01	900	74	79	45	45	84.6	33.5	10,000	46.3	65	202	25% PG	200	30	1,000	0.25	3	80	285	65	1,500	8,500	55.4	APPROX 85	53.6	APPROX 90	189,000	3,000	7000	37.2	APPROX 85	35.4	APPROX 90	117,000

- NOTES:
- CONTROLLER SHALL MAXIMIZE DEHUMIDIFICATION FROM THE OUTDOOR AIR STREAM WITH THE DX PRE-COOLING COIL, THEN SUPPLEMENT OR UTILIZE DESICCANT DHUMIDIFICATION WHEN DX-ONLY PRE-COOLING CANNOT MEET THE SUPPLY AIR DEWPOINT TARGET.
  - SPECIFIED SUPPLY AIR AND SPACE DEWPOINT TARGETS ARE SELECTED TO MITIGATE CONDENSATION ON PIPES DUE TO COLD WATER WITHIN PIPING. UNIT SHALL CONTROL DISCHARGE AIR DEWPOINT BASED A TEMPERATURE TRANSMITTER INSTALLED ON PROCESS PIPE.
  - AIRFLOW RATE AND DISCHARGE TEMPERATURE FOR DESICCANT REACTIVATION SHALL BE DETERMINED BY MANUFACTURER TO MAXIMIZE EFFICIENCY. VALUES SHOWN IN SCHEDULE ARE UTILIZED FOR ELECTRICAL DESIGN PURPOSES.
  - AIRFLOW RATES FOR DESICCANT WHEEL BYPASS SHALL BE DETERMINED BY MANUFACTURER TO PROVIDE TARGET SUPPLY AIR DEWPOINT TEMPERATURE AT SPECIFIED CONDITIONS. UNIT DISCHARGE AIR TEMPERATURE RESULTING FROM WHEEL/BYPASS AIRFLOWS SHWALL NOT EXCEED 95 DEG-F.
  - DESICCANT WHEEL ENTERING AIR CONDITIONS ARE BASED ON MIXING OF RETURN AIR AT THE SPECIFIED SPACE CONDITIONS AND OUTDOOR AIR AT THE SPECIFIED OUTDOOR AIR CONDITIONS. DEWPOINT TEMPERATURES ARE PRE-DETERMINED HOWEVER RETURN AIR DRY BULB TEMPERATURES WILL DEPEND ON HEAT IMPARTED BY DESICCANT WHEEL AS WELL AS COOLING IN SPACE BY TANK WALLS.
  - POST-HEATING ENTERING TEMPERATURE IS BASED ON MIXING OF RETURN AIR AT MINIMUM ALLOWABLE SPACE TEMPERATURE (50 °F) AND OUTDOOR AIR.
  - FOR BIDDING PURPOSES, IT IS ASSUMED THAT A 10-TON CONDENSING UNIT FOR THE PRE-COOLING COIL WILL BE FURNISHED SEPARATELY FROM THE DHU ENCLOSURE AND WILL REQUIRE ITS OWN 25-AMP POWER FEEDER. INCORPORATION OF THE CONDENSER INTO THE DHU ENCLOSURE AND USE OF SINGLE-POINT POWER IS ACCEPTABLE.

PENTHOUSE LOUVERS SCHEDULE

TAG	LOCATION	MANUFACTURER		TYPE	MATERIAL	AIRFLOW (CFM)	SIZE			FREE AREA (SQFT)	MAX FACE VEL. (FPM)	STATIC P.D. ("WG)	NOTES
		MAKE	MODEL				WIDTH (IN)	HEIGHT (IN)	HEIGHT (IN)				
PH-01	HVAC PLENUM (217)	RUSKIN	PHB - ELF375DXH	INTAKE	ALUMINUM	1,835	28	28	28	9.8	200	0.01	1

- NOTES:
- REFER TO SPECIFICATION 23 31 13 FOR CONSTRUCTION AND ACCESSORY DETAILS

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REV	ISSUED FOR			DATE	BY

BID SET



**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

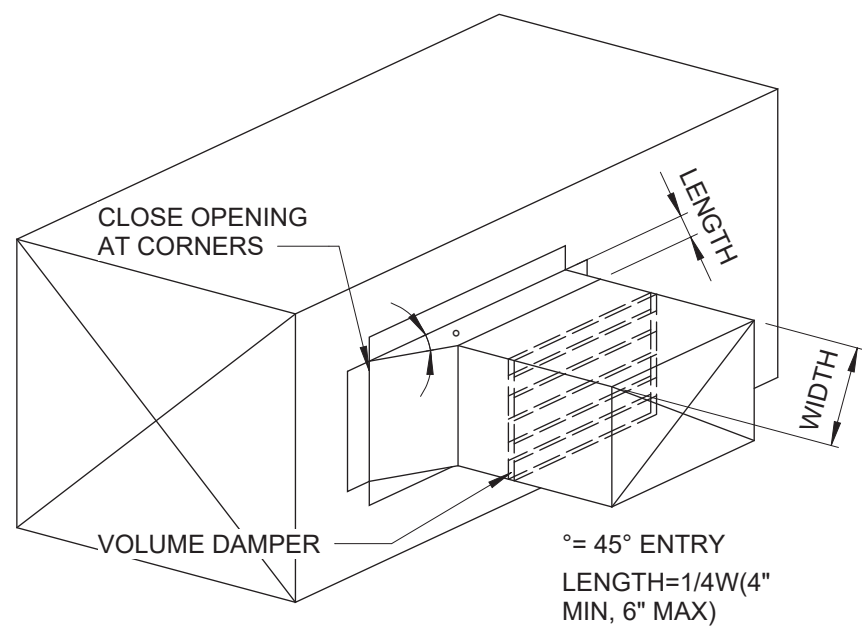
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

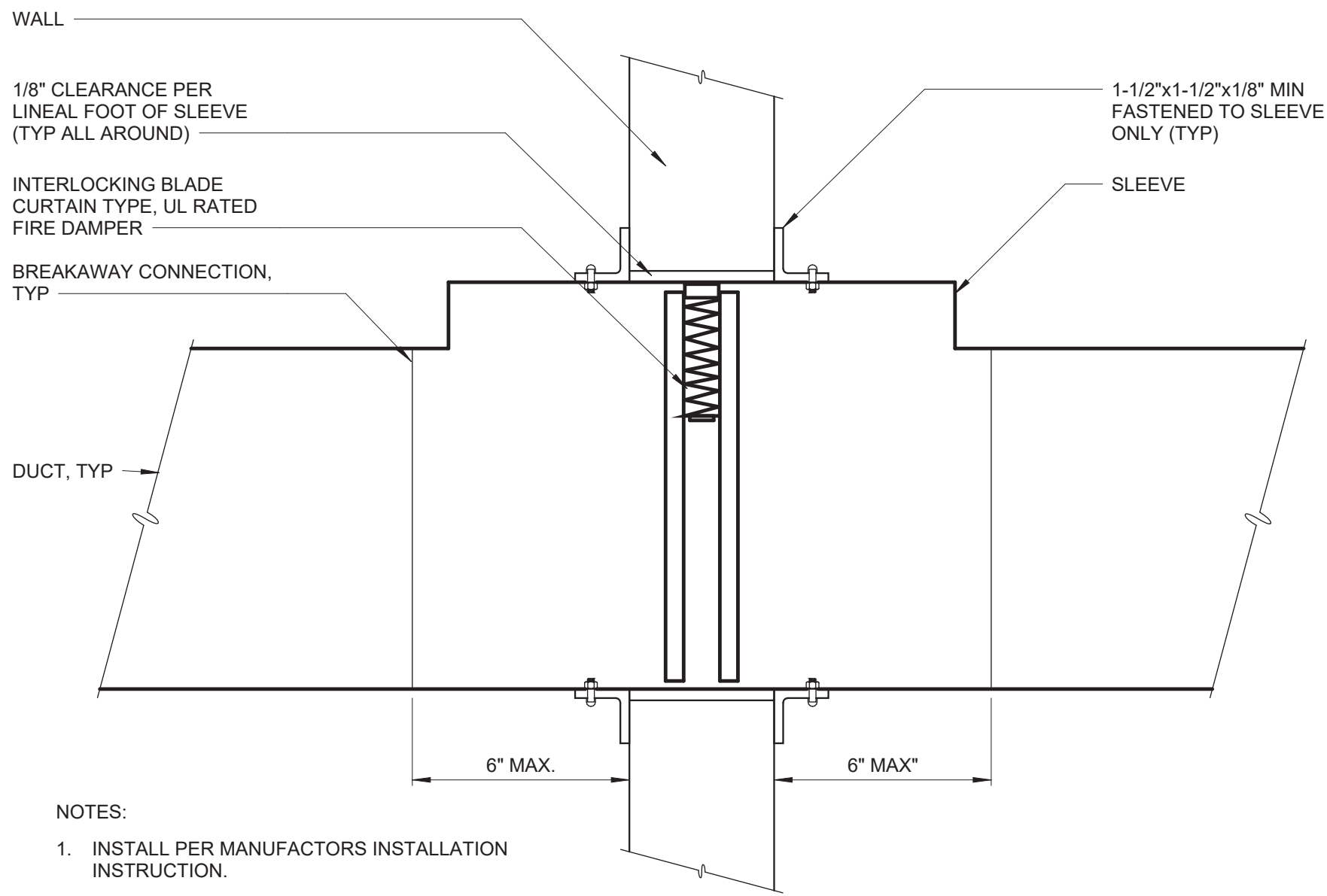
FILTRATION PLANT  
HVAC  
SCHEDULES - SHEET 4

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-603

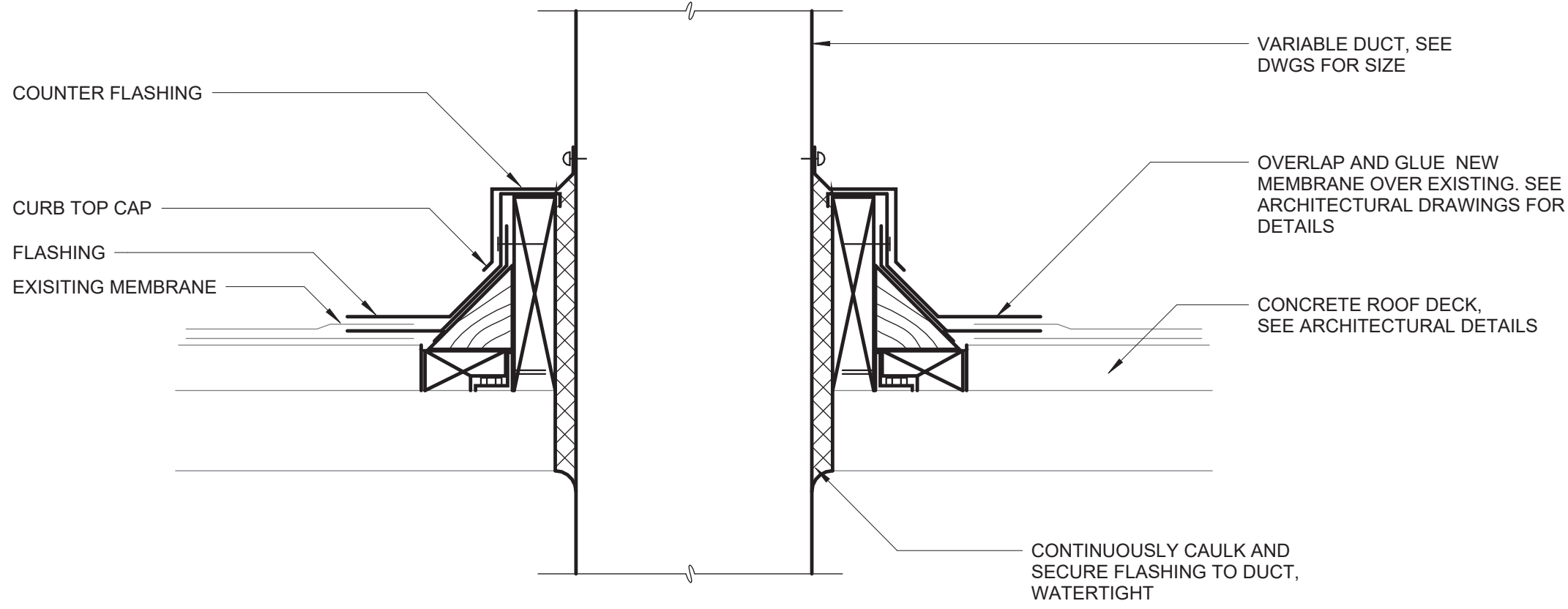




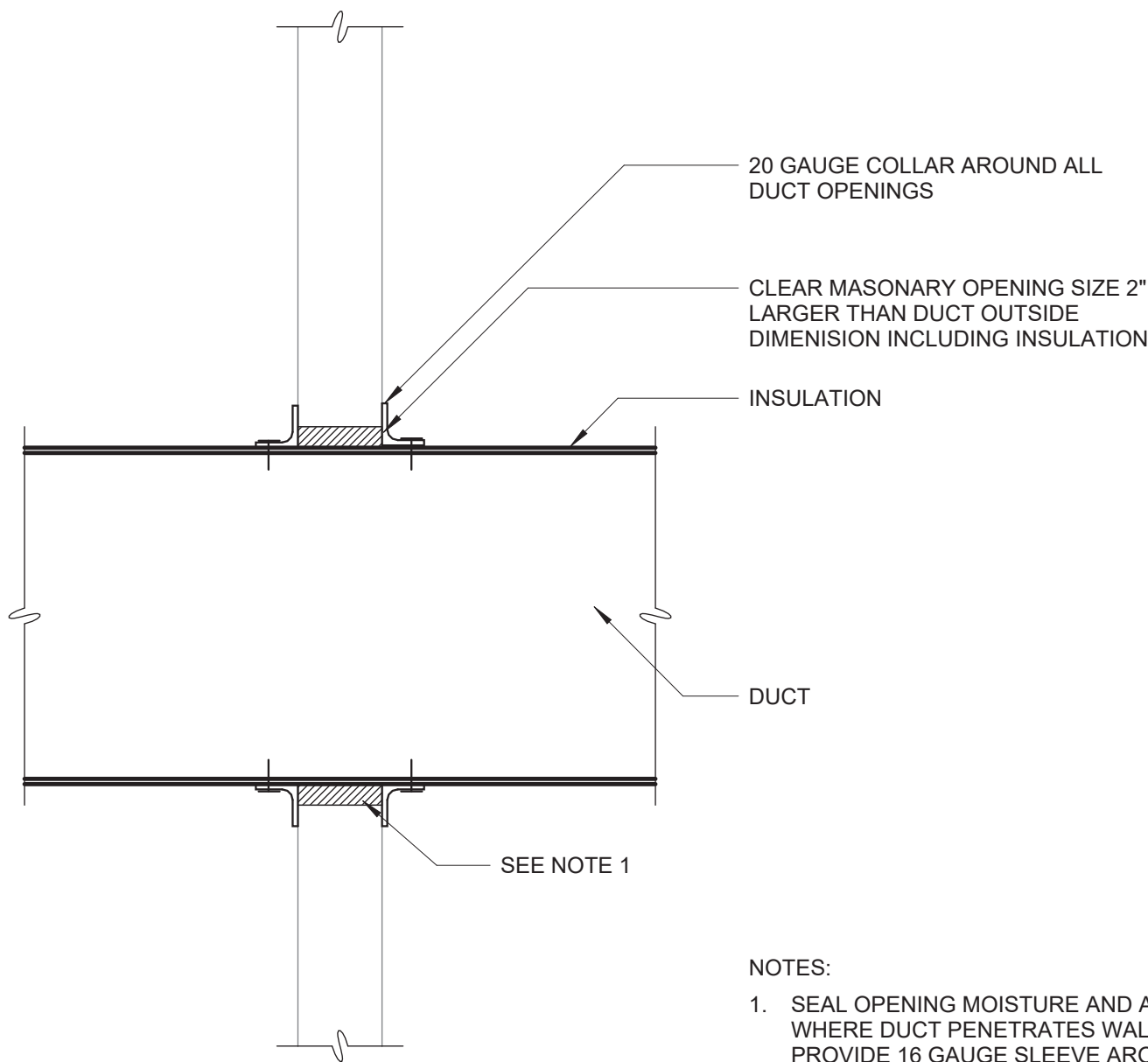
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CONNECTION  
  
H-23-0102



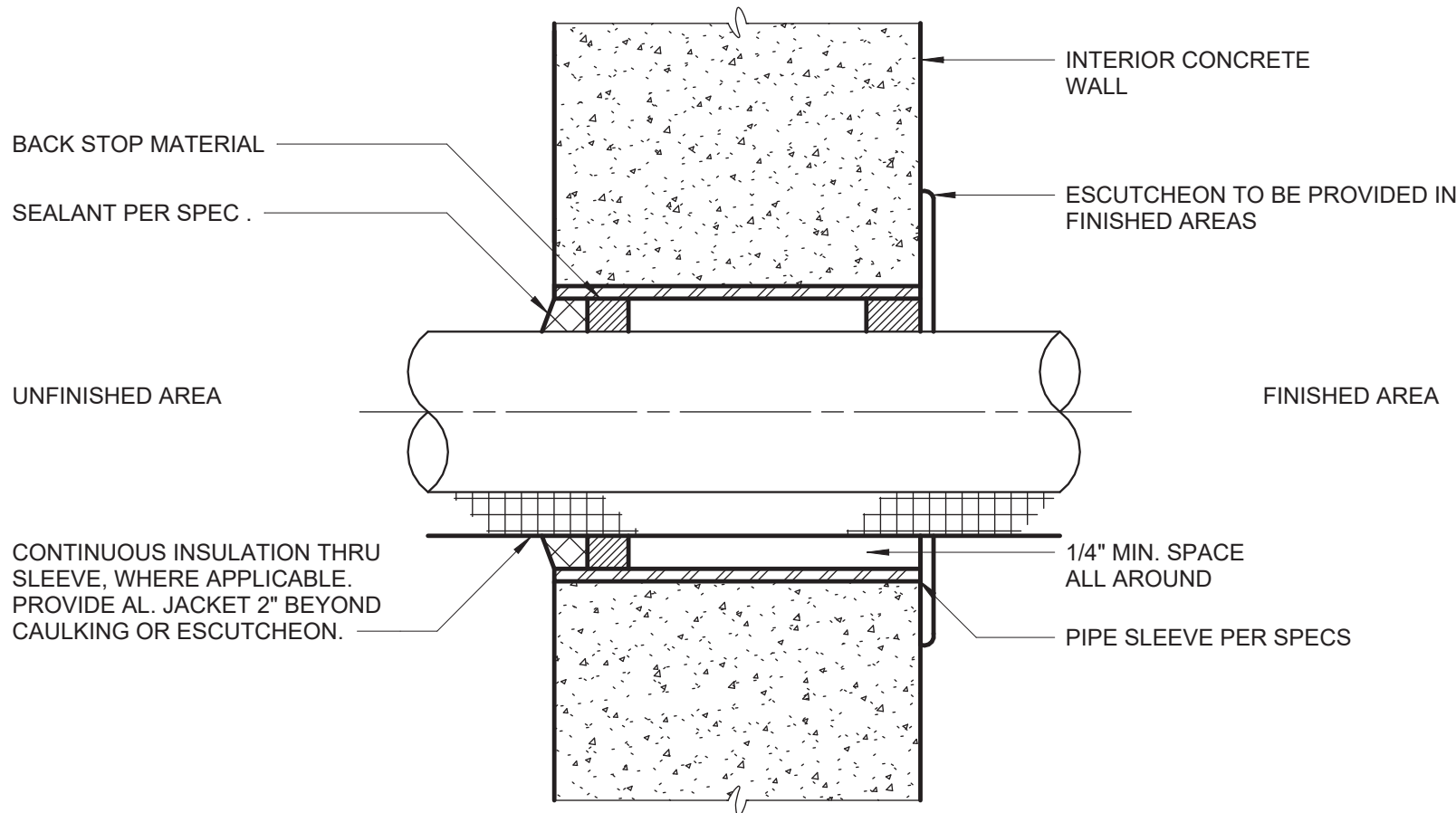
FIRE DAMPER  
INSTALLATION  
  
H-23-0201



DUCT  
PENETRATION  
ROOF  
  
H-23-0203



DUCT  
PENETRATION  
WALL  
  
H-23-0204



PIPE SLEEVE WALL PENETRATION  
  
P-22-0217

- NOTES:
1. SEAL OPENING MOISTURE AND AIRTIGHT WHERE DUCT PENETRATES WALLS. PROVIDE 16 GAUGE SLEEVE AROUND ENTIRE OPENING.

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	R. FROST
DESIGNED BY:	M. GIORDANO
DRAWN BY:	R. CHIN
CHECKED BY:	R. VAN DYKE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

BID SET



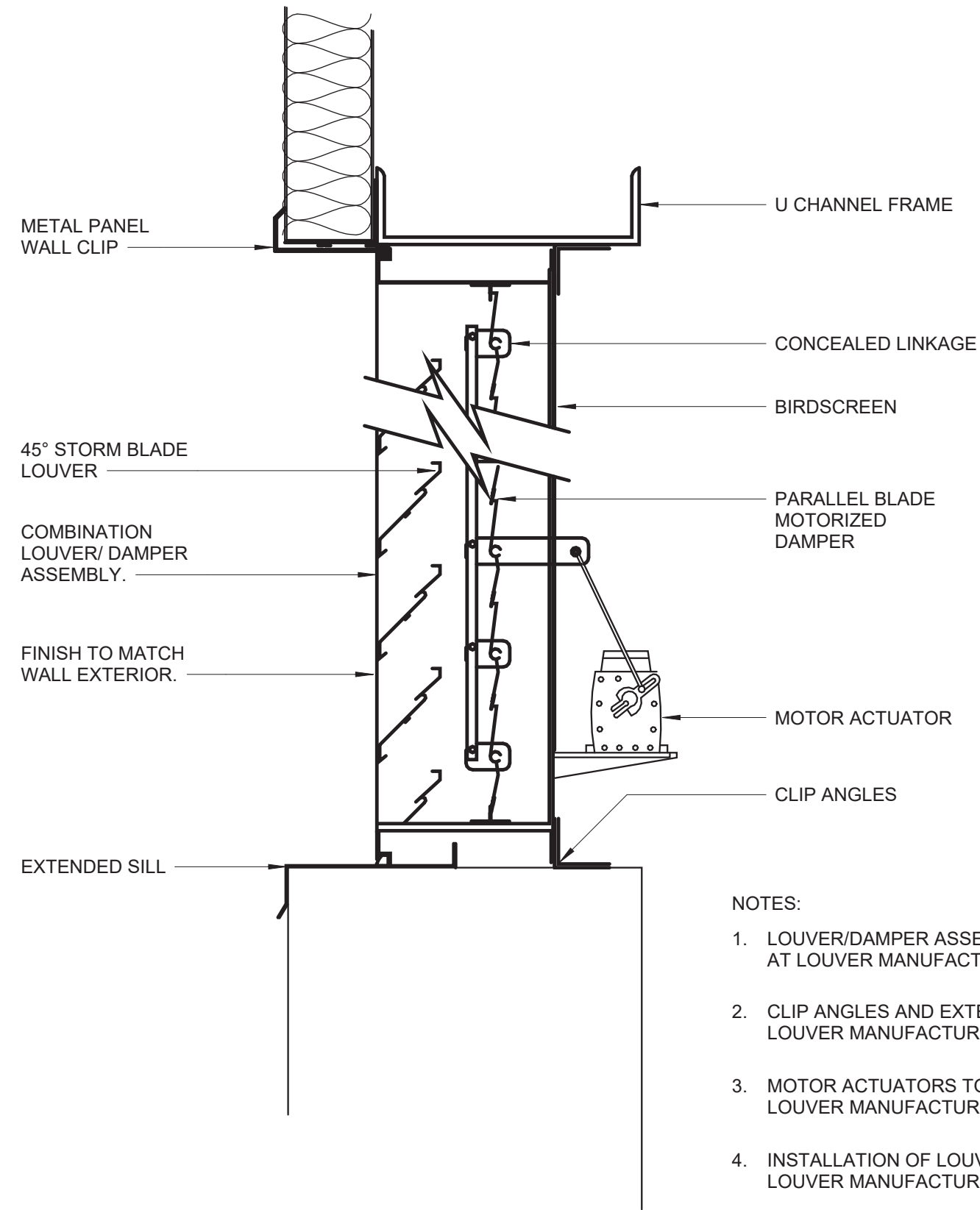
**Hazen**  
HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
DETAILS - SHEET 1

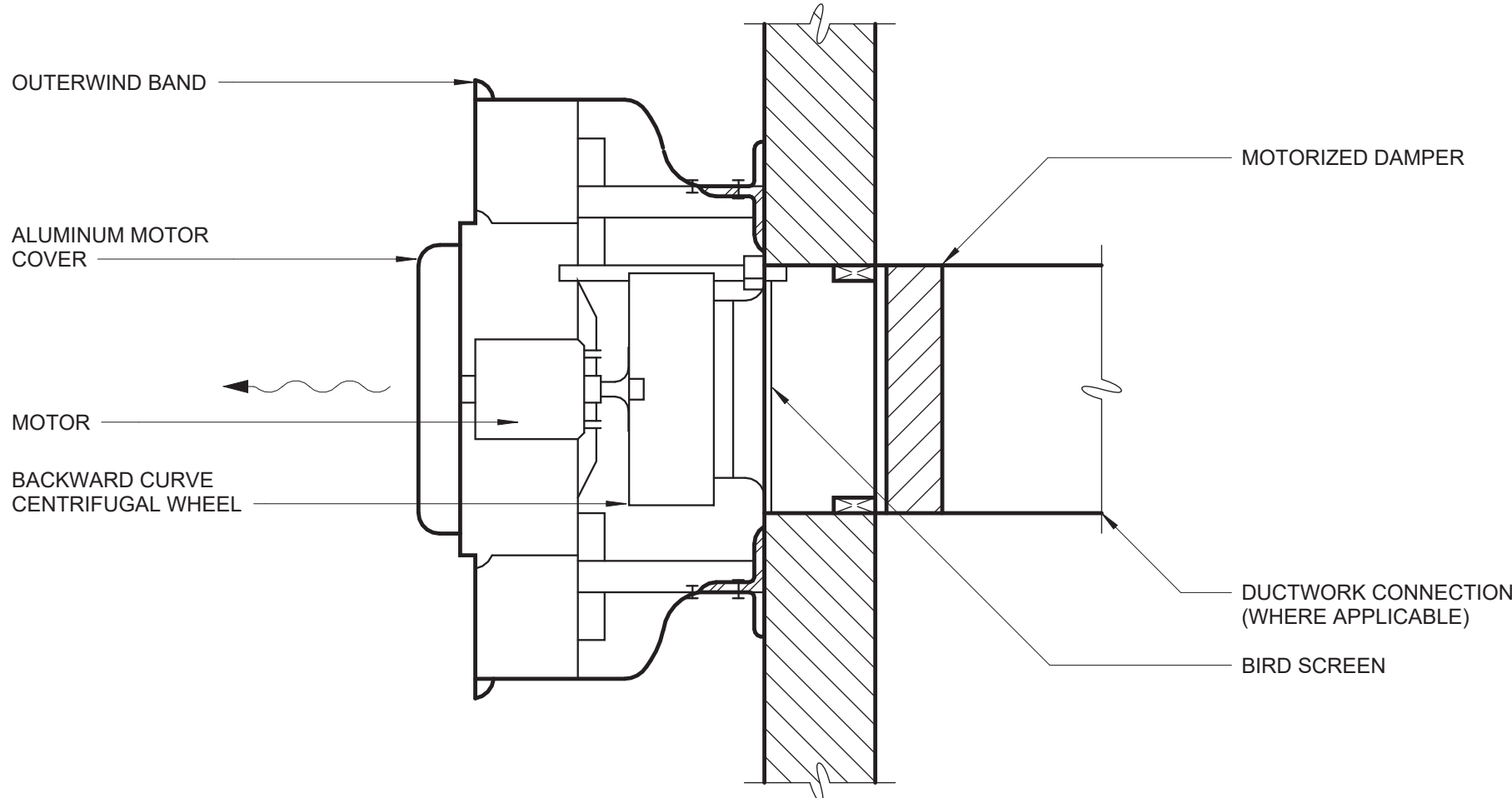
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-604



COMBINATION LOUVER/DAMPER  
(vers 2)

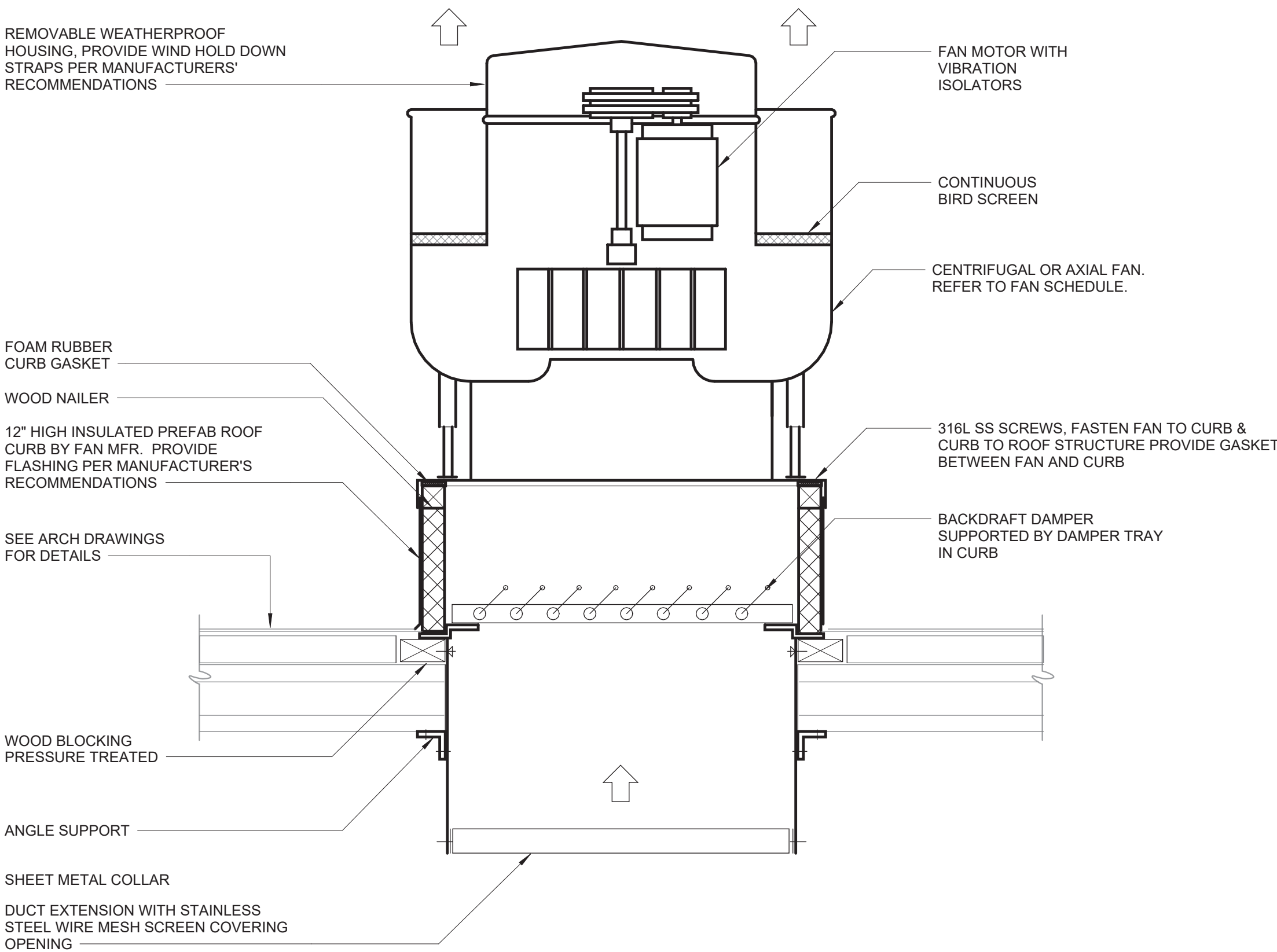
H-23-0214

- NOTES:
1. LOUVER/DAMPER ASSEMBLIES TO BE ASSEMBLED AT LOUVER MANUFACTURER FACTORY.
  2. CLIP ANGLES AND EXTENDED SILL TO BE PROVIDED BY LOUVER MANUFACTURER.
  3. MOTOR ACTUATORS TO BE SIZED AND INSTALLED BY LOUVER MANUFACTURER.
  4. INSTALLATION OF LOUVER TO BE IN ACCORDANCE WITH LOUVER MANUFACTURER'S RECOMMENDATIONS.



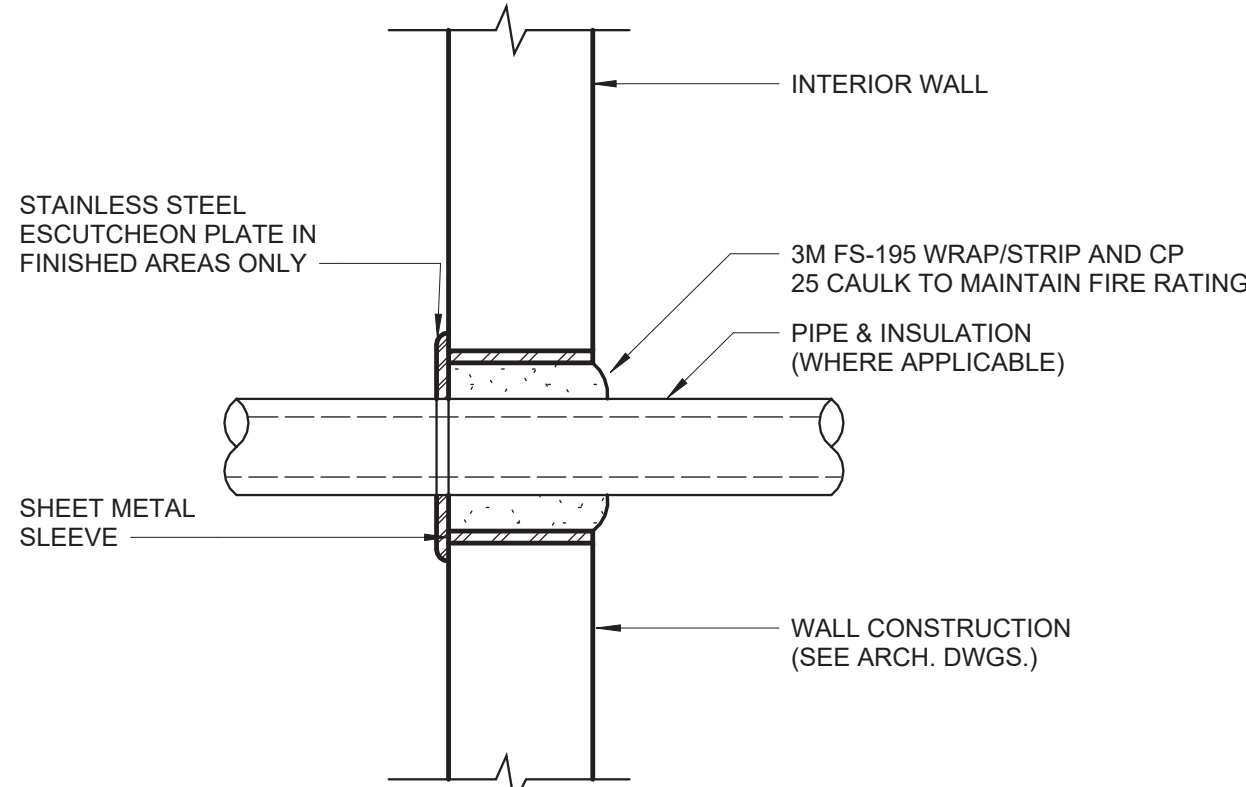
CENTRIFUGAL WALL EXHAUST FAN

H-23-0610



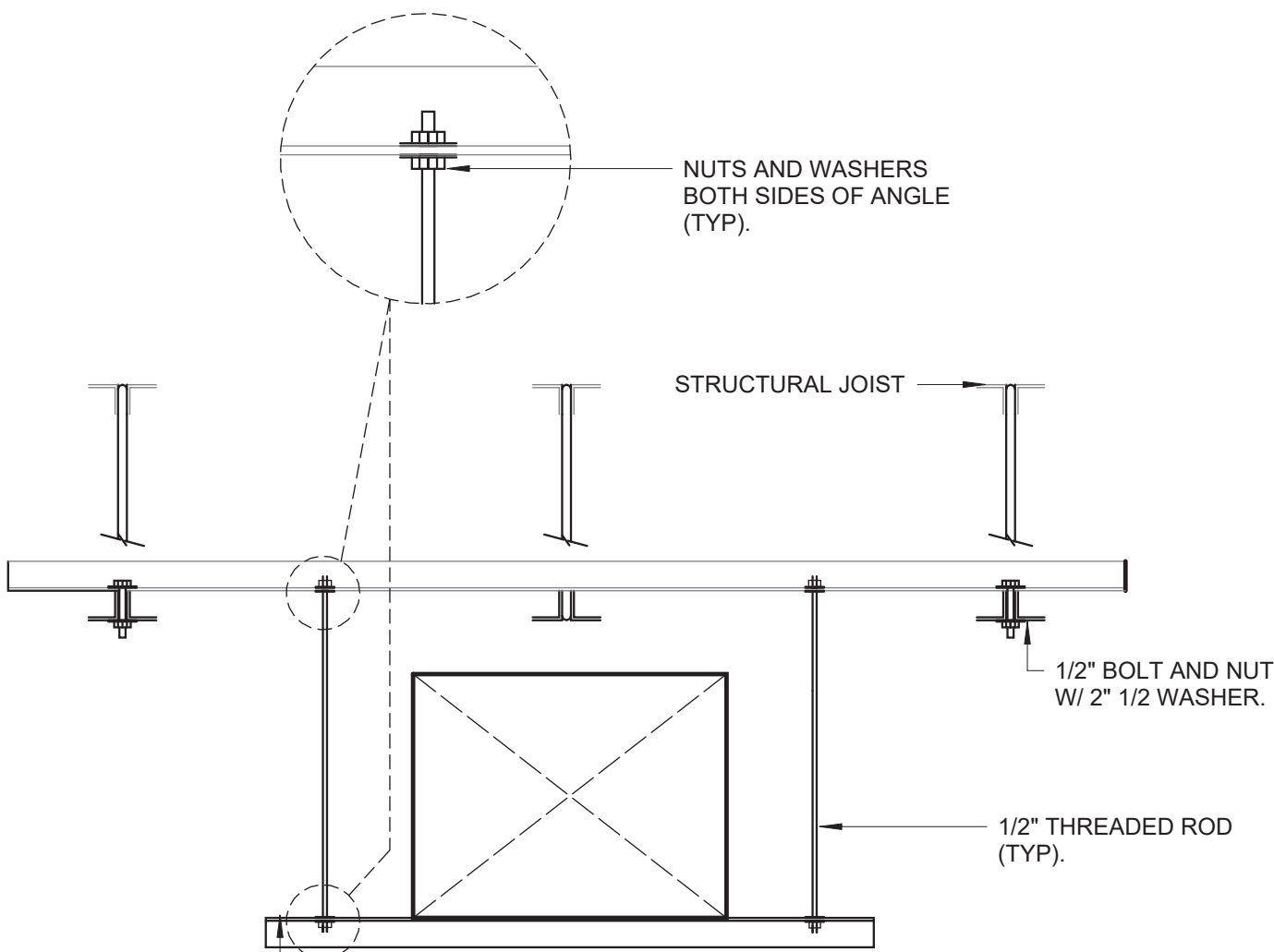
EXHAUST FAN

H-23-0614



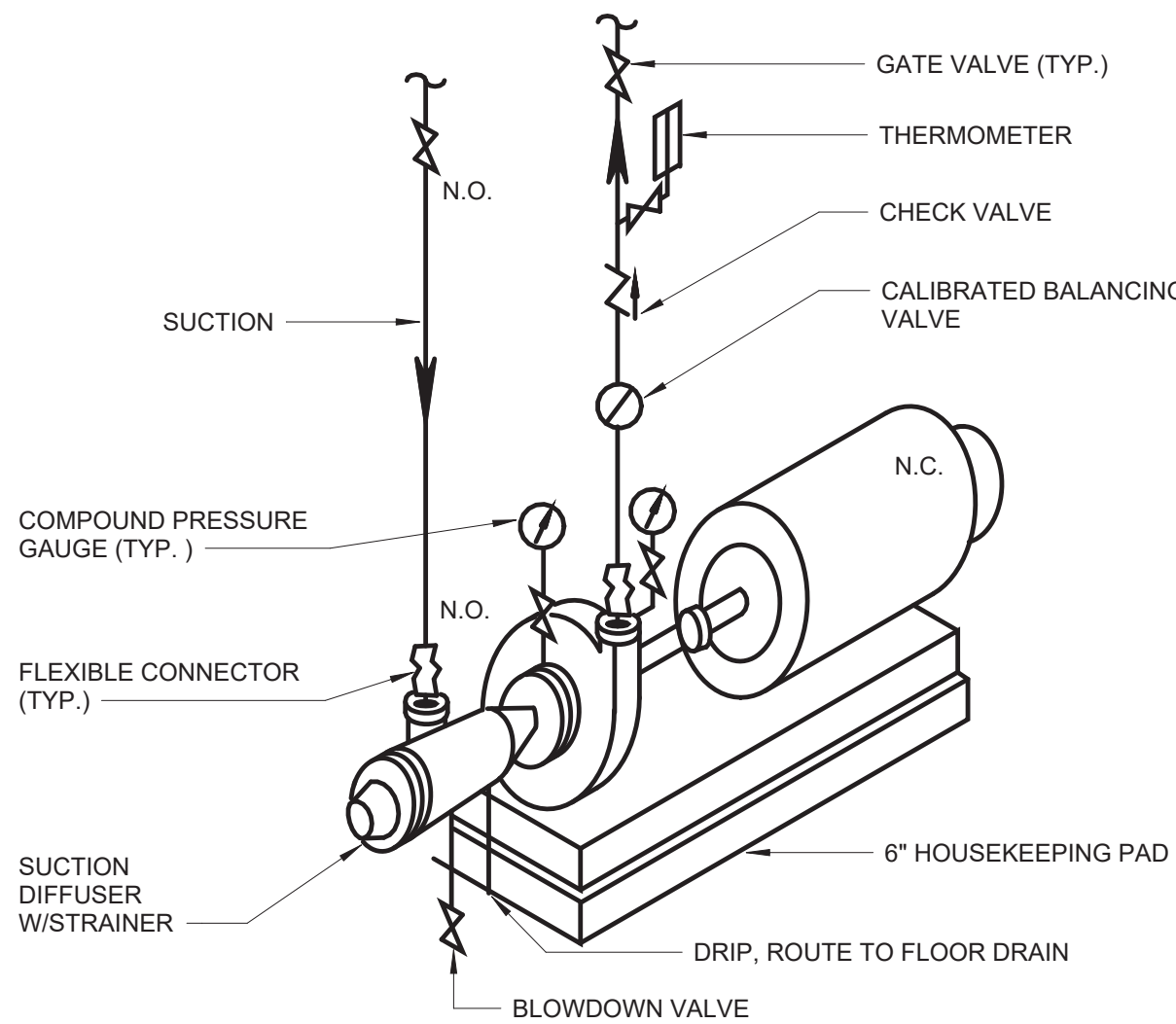
RATED WALL PENETRATION

P-22-0209



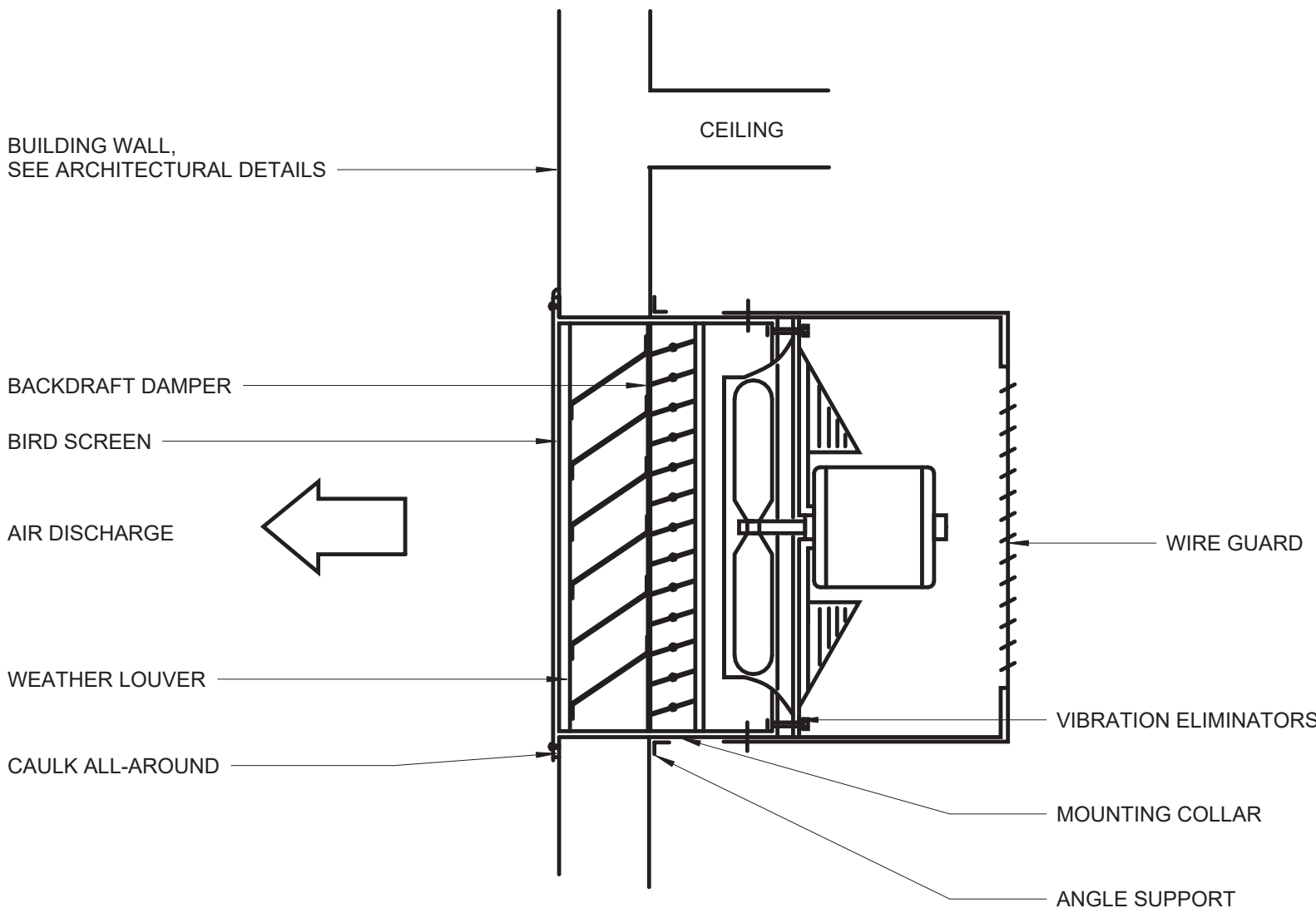
DUCT HANGER

H-23-0303



END SUCTION PUMP

H-23-0908



PROPELLER FAN B

H-23-0616

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BID SET



**Hazen**

HAZEN AND SAWYER  
498 SEVENTH AVENUE, 11th FLOOR  
NEW YORK, NEW YORK 10018

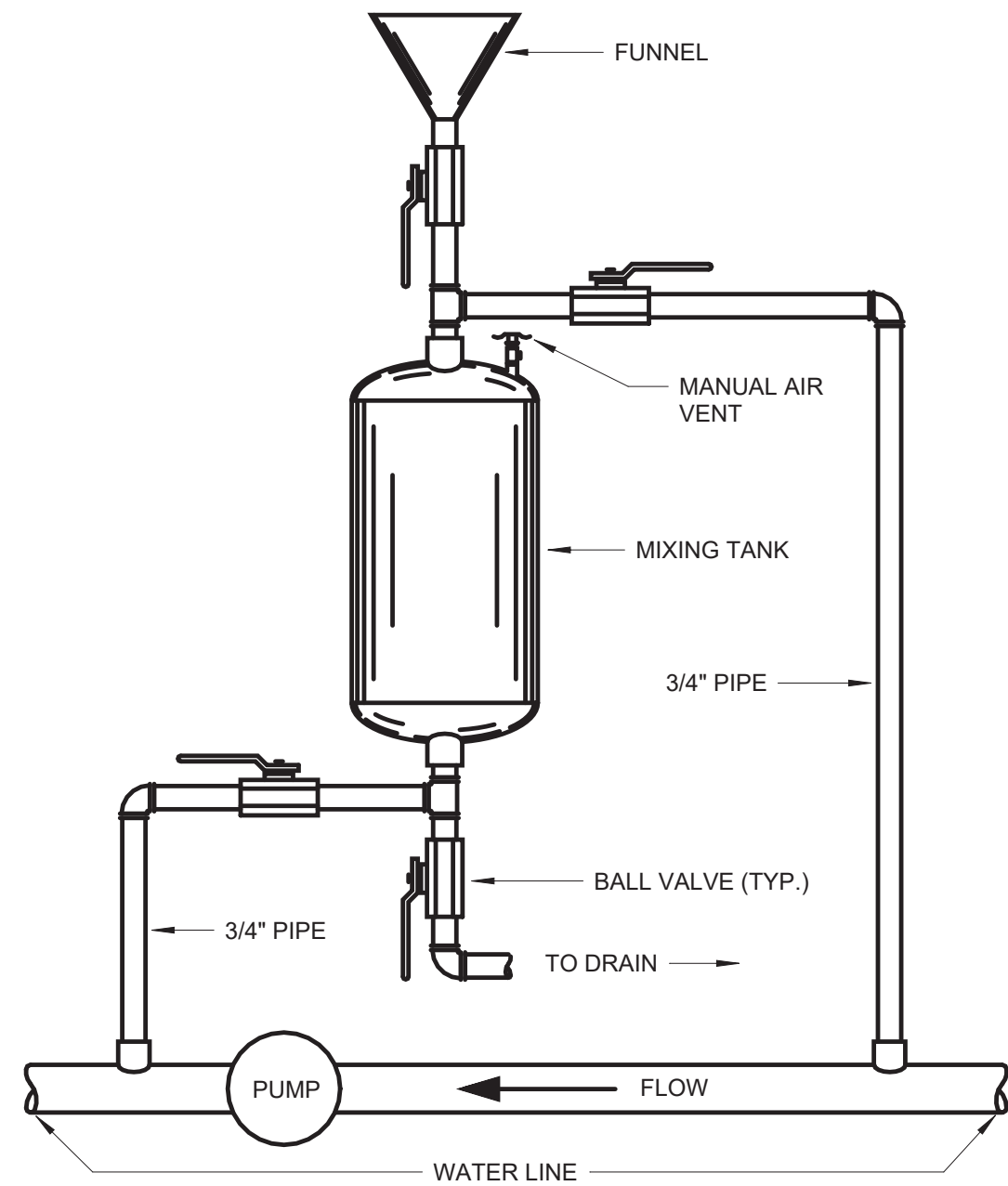
WESTCHESTER JOINT WATER WORKS  
MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

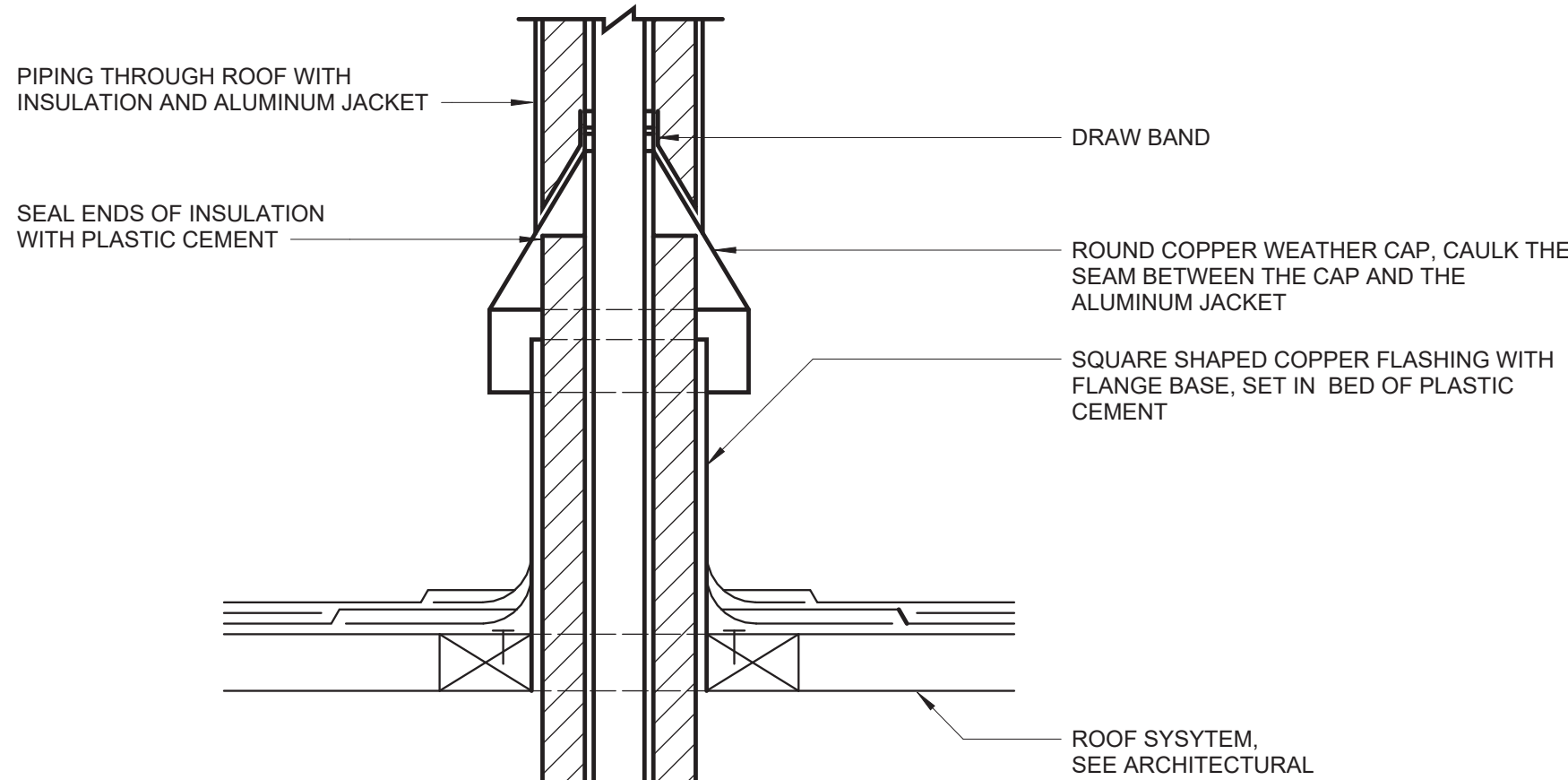
FILTRATION PLANT  
HVAC  
DETAILS - SHEET 2

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-605

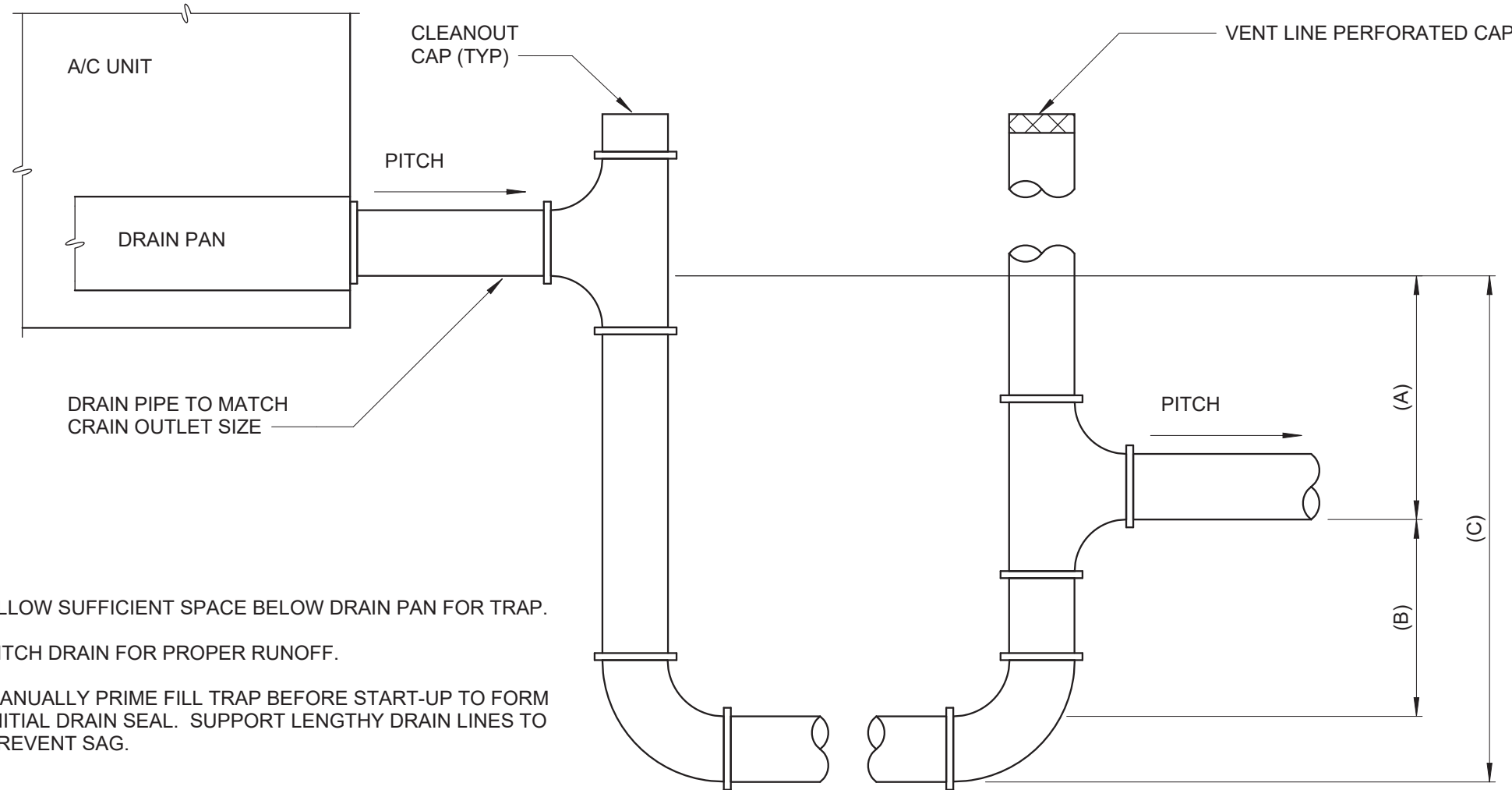




CHEMICAL FEED TANK  
H-23-0635



PIPE ROOF PENETRATION  
P-22-0215



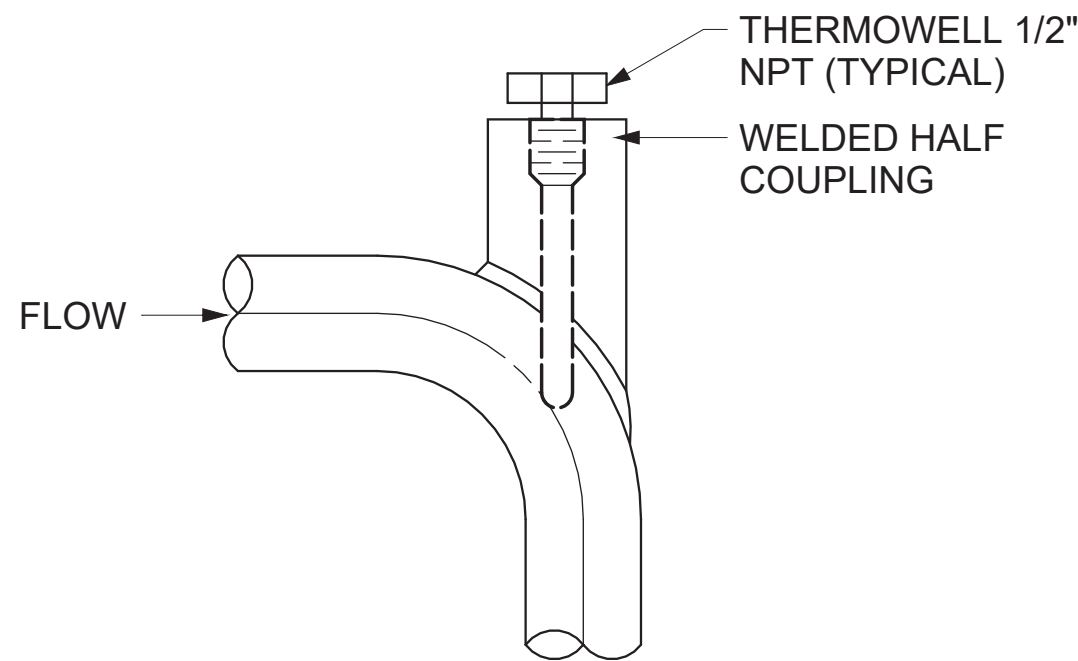
NOTES:

1. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP.
2. PITCH DRAIN FOR PROPER RUNOFF.
3. MANUALLY PRIME FILL TRAP BEFORE START-UP TO FORM INITIAL DRAIN SEAL. SUPPORT LENGTHY DRAIN LINES TO PREVENT SAG.

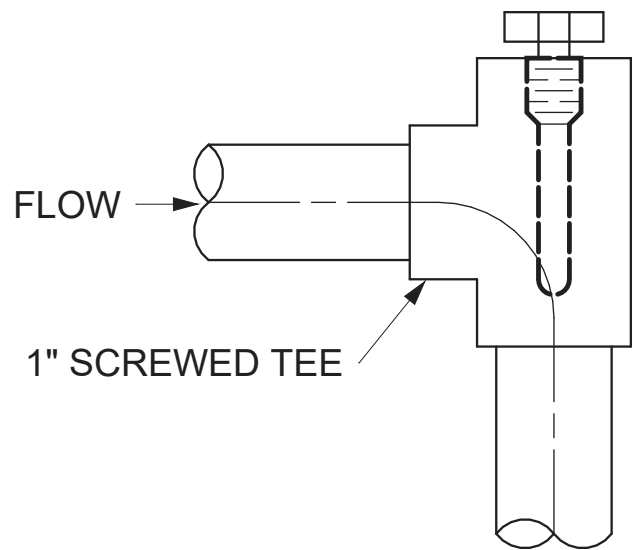
DRAW THROUGH COIL (NEGATIVE PRESSURE):

- A. 1 INCH FOR EACH OF NEGATIVE PRESSURE PLUS 1 INCH (NEGATIVE STATIC PRESSURE IN INCHES WG WITH DIRTY FILTERS, COILS, AND MAXIMUM AIR FLOW.)
- B. THIS DIMENSION IN INCHES MUST BE EQUAL TO MIN 1/2 OF THE (A) ABOVE.
- C. EQUALS (A) + (B) + PIPE DIAMETER + INSULATION

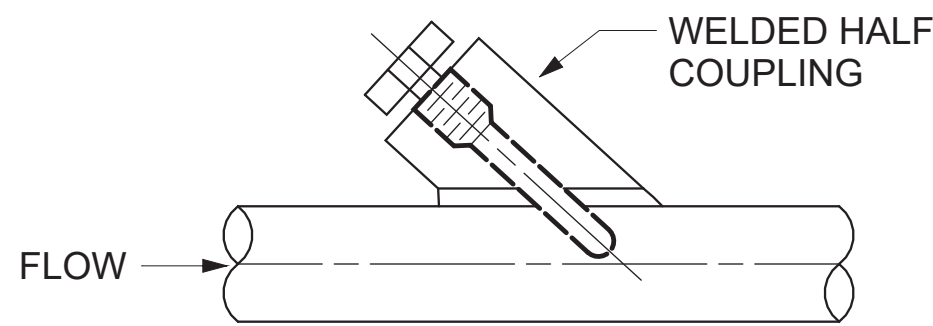
AIR  
CONDITIONER  
COIL TRAP  
H-23-0401



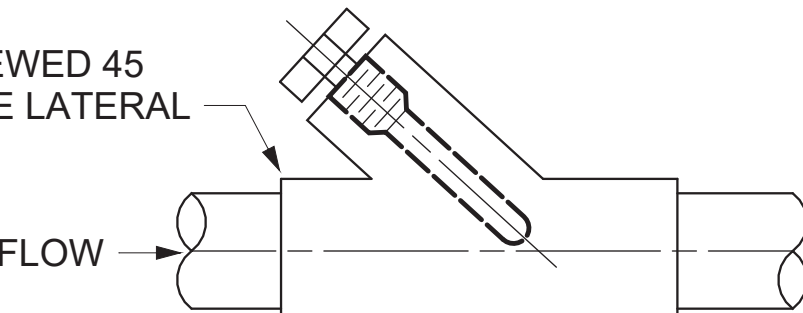
LINE SIZE 3 INCH  
OR LARGER



LINE SIZE SMALLER  
THAN 3 INCH



LINE SIZE 3 INCH  
OR LARGER

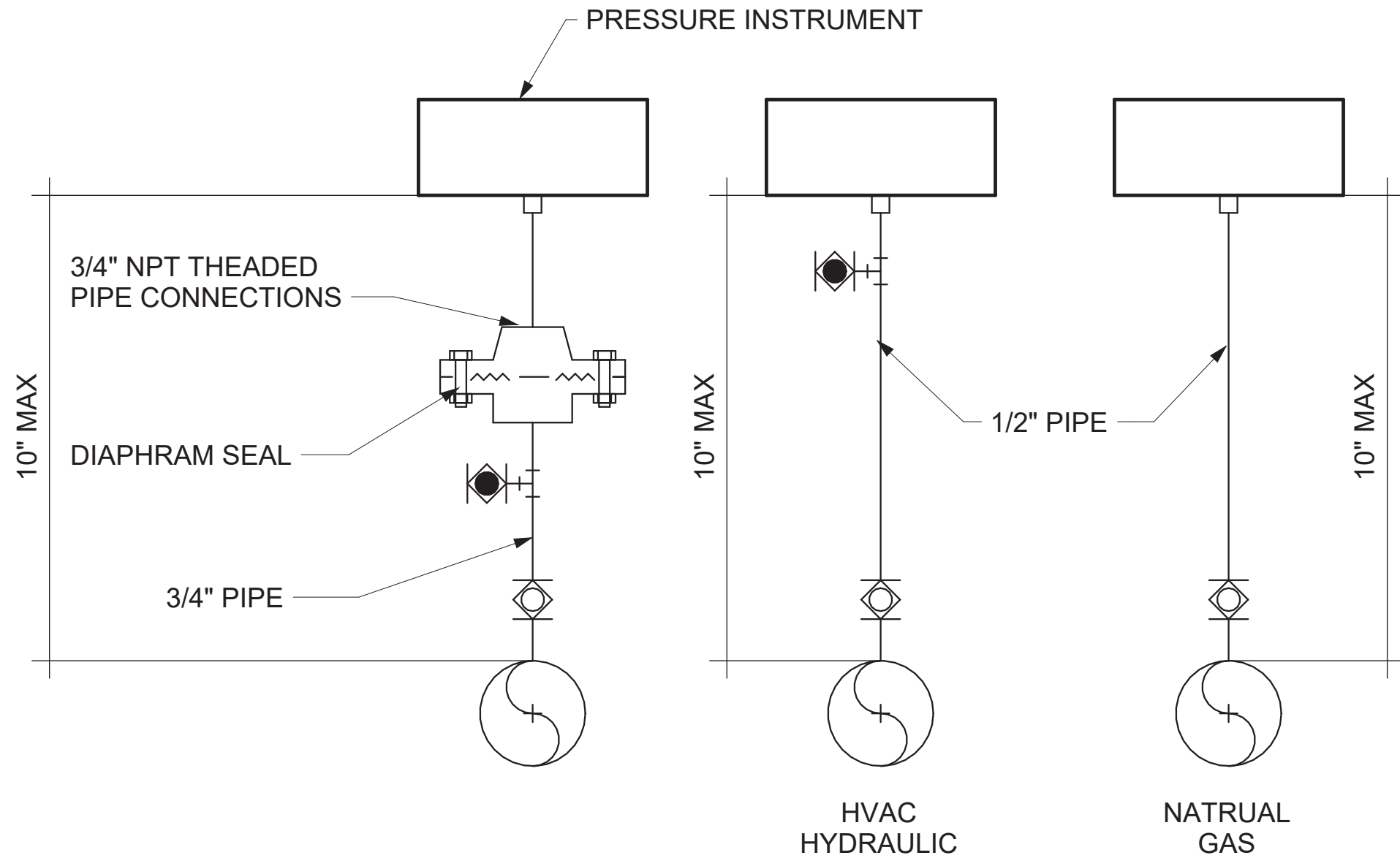


LINE SIZE SMALLER  
THAN 3 INCH

NOTE:

INSTALL THERMOWELL AT 1/2  
THE INSIDE DIAMETER OF THE  
PROCESS PIPE.

1 PROCESS LINE TAP THERMOWELLS  
NOT TO SCALE



4 PRESSURE INSTRUMENTS  
NOT TO SCALE

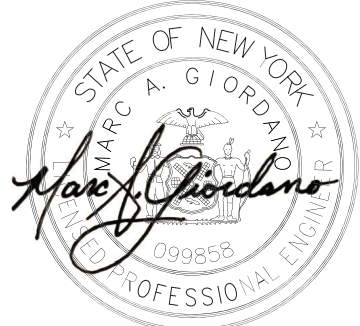
Autodesk Docs/90388-000\_Rye\_Lake\_Filtration/90388-000-WFP-H-01  
2/18/2025 2:44:00 PM

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MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT  
HARRISON, NY

FILTRATION PLANT  
HVAC  
DETAILS - SHEET 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	H-606