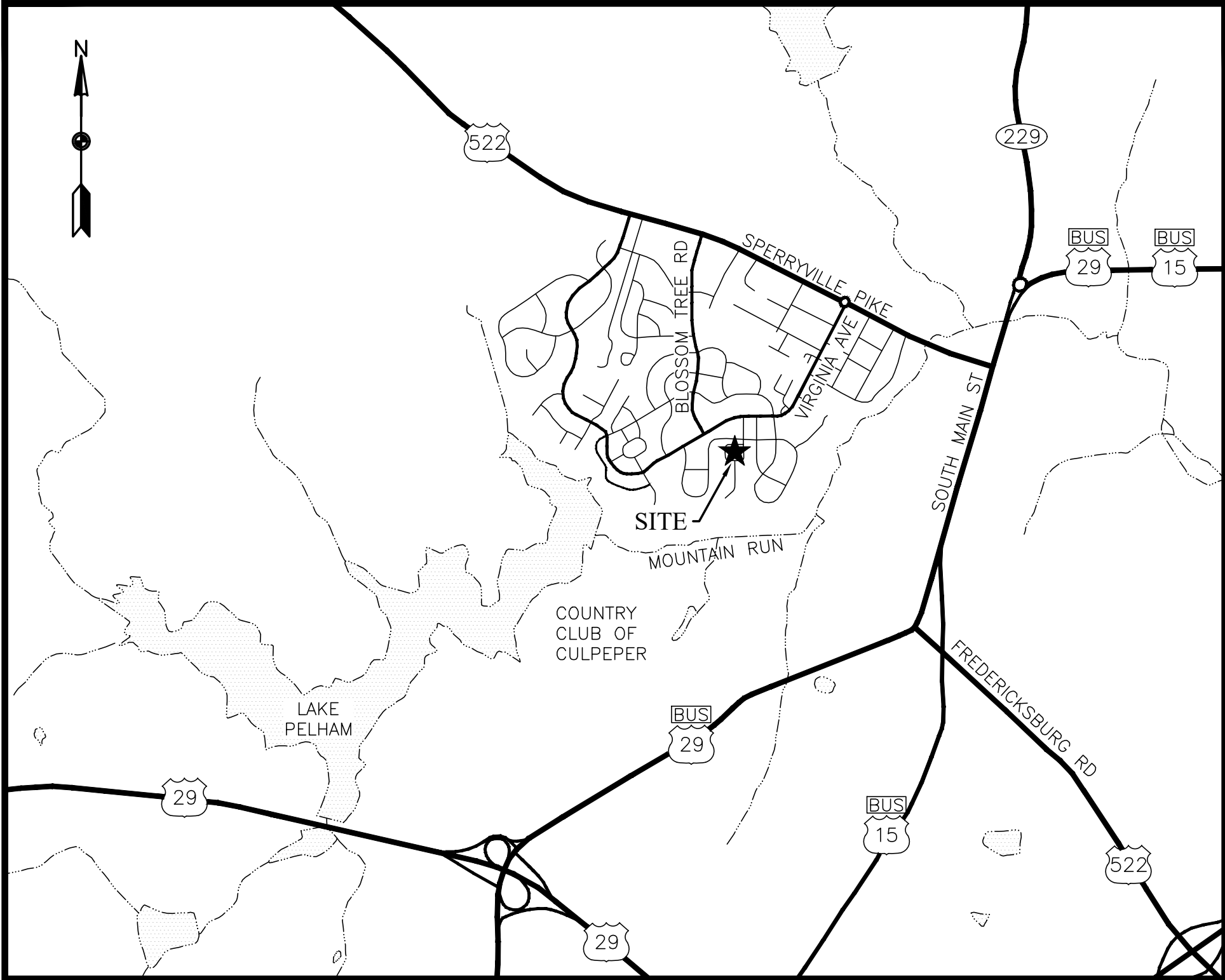


WATER TREATMENT PLANT IMPROVEMENTS TOWN OF CULPEPER, VIRGINIA

<u>SHEET NO.</u>	<u>DRAWING NO.</u>	<u>TITLE</u>
1 OF 12	C-1	COVER SHEET
2 OF 12	C-2	GENERAL NOTES, DETAILS, & ABBREVIATIONS
3 OF 12	C-3	EXISTING CONDITIONS AND DEMOLITION - PLAN
4 OF 12	C-4	EXISTING CONDITIONS AND DEMOLITION - SECTION A
5 OF 12	C-5	EXISTING CONDITIONS AND DEMOLITION - SECTION B
6 OF 12	C-6	EXISTING CONDITIONS AND DEMOLITION - CONTROL CENTER PLAN
7 OF 12	C-7	FILTER TROUGH NEW CONSTRUCTION - PLAN
8 OF 12	C-8	FILTER TROUGH NEW CONSTRUCTION - SECTION A
9 OF 12	C-9	FILTER TROUGH NEW CONSTRUCTION - SECTION B
10 OF 12	C-10	DETAILS - PHOTOGRAPHIC INSTRUCTION
11 OF 12	C-11	DETAILS - PHOTOGRAPHIC INSTRUCTION
12 OF 12	C-12	FILTER VACUUM PUMP - ISOMETRIC



VICINITY MAP
SCALE: 1"=2000

SITE DATA

OWNER INFORMATION:
NAME: TOWN OF CULPEPER
CONTACT: MR. JIM HOY, P.E.
DIRECTOR OF PUBLIC SERVICES
ADDRESS: 15048 SERVICE LANE
CULPEPER, VA 22701

ENGINEER INFORMATION:
NAME: WW ASSOCIATES, INC.
CONTACT: HERBERT F. WHITE, III, P.E.
ADDRESS: 968 OLYMPIA DRIVE, SUITE 1
CHARLOTTESVILLE, VA 22911
TELEPHONE: (434) 984-2700
FAX: (434) 978-1444
E-MAIL: HWHITE@WWASSOCIATES.NET

WTP ADDRESS: 816 WOODVIEW ROAD
CULPEPER, VA 22701

TAX MAP REFERENCE: TMP# 40-75C

M:\219044 ToCulpeper WTP Upgrade\219044.00 Filter Trough Replacement\904400C_CS-1.dwg

[illegible]

THESE DRAWINGS ARE FOR IMPROVEMENTS TO THE TOWN OF CULPEPER, WATER TREATMENT PLANT, INCLUDING REPLACEMENT OF ANNUAL FLUME, INLET SIPHONS, VACUUM TANK AND PIPING, AND INTERIOR MODIFICATIONS REQUIRED FOR THE CONSTRUCTION OF THESE IMPROVEMENTS.

2. THE SEQUENCE OF CONSTRUCTION SHALL BE AS FOLLOWS:

I. DEMOLISH PORTION OF INTERIOR CMU WALL, UP TO 12' IN WIDTH AND 8' IN HEIGHT, TO ALLOW FOR THE REMOVAL OF ACCESS PLATFORMS, ANNUAL FLUME, VACUUM TANK, ACCESSORIES AND PIPING. WALL DEMOLITION SHALL INCLUDE SUBMISSION OF A TEMPORARY SHORING PLAN CERTIFIED BY A PROFESSIONAL ENGINEER. IF DEMOLITION REQUIRES REMOVAL OF WINDOW, RETAIN WINDOW FOR REINSTALLATION.

II. REMOVE ACCESS PLATFORM, WALKWAYS AND HANDRAILS AND RETAIN FOR REINSTALLATION.

III. REMOVE (1) ANNUAL FLUME, (1) VACUUM TANK, (4) INLET SIPHONS, AND ALL ASSOCIATED ACCESSORIES AND PIPING UP TO AND INCLUDING THE 2" UNIONS DIRECTLY ABOVE THE TWO VACUUM TANKS.

IV. PROVIDE (1) NEW ANNUAL FLUME, (1) NEW VACUUM TANK, (4) NEW INLET SIPHONS, AND ALL NEW ASSOCIATED ACCESSORIES AND PIPING UP TO AND INCLUDING THE 2" UNIONS DIRECTLY ABOVE THE TWO VACUUM TANKS. FLUME SHALL BE PROVIDED WITH WATERTIGHT BOLTED CONNECTION TO CONCRETE SUPPORT STRUCTURE AND CONCRETE INLET FLUME.

V. REINSTALL ACCESS PLATFORM, WALKWAYS, AND HANDRAILS, REPLACING HARDWARE AS NEEDED TO ENSURE SAFE PEDESTRIAN ACCESS ACCORDING TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS.

VI. REBUILD AND PAINT PORTION OF CMU WALL, REINSTALLING WINDOW IF ITS REMOVAL WAS REQUIRED DURING DEMOLITION.

3. ORIGINAL CONSTRUCTION PLANS DATED NOVEMBER 1991, TITLED "TOWN OF CULPEPER, VA / WATER TREATMENT PLANT" SHEETS C-22, C-24, C-25, AND DETAILS OF SYSTEM BYPASS ARE USED IN THIS PLAN TO REPRESENT EXISTING PLANT LAYOUT.

4. THE CONTRACTOR SHALL INSPECT THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS AND THE CONSTRUCTION OF THE NEW IMPROVEMENTS SHOWN ON THIS PLAN.

5. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE CONTRACT DRAWINGS, PROJECT MANUAL, SUBMITTALS, AND SHOP DRAWINGS AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.

6. THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING STRUCTURES, PIPING, AND UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AND ARE BASED ON FIELD SURVEY, VISIBLE SURFACE EVIDENCE, AND AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION. THE DIAMETERS OF THE EXISTING PIPING ARE APPROXIMATE AND SHALL BE VERIFIED PRIOR TO PERFORMING FINAL CONNECTIONS.

7. ALL DIMENSIONS INDICATED SHALL BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.

8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK.

9. CHANGES IN NEW PIPING FROM THAT SHOWN ON THE DRAWINGS, TO AVOID CONFLICTS WITH EXISTING ELECTRICAL SYSTEMS, MECHANICAL SYSTEMS, EQUIPMENT, STRUCTURES, OR EXISTING PIPING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. LIKEWISE, ALTERATIONS TO EXISTING ELECTRICAL SYSTEMS, MECHANICAL SYSTEMS, EQUIPMENT, OR EXISTING PIPING TO ACCOMMODATE NEW PIPING AND EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL SUCH CHANGES MUST BE APPROVED BY THE OWNER AND THE ENGINEER.

10. PROVIDE A MINIMUM OF 18 INCHES CLEARANCE BETWEEN PIPING AND FOOTINGS, STRUCTURES, AND OTHER PIPING UNLESS OTHERWISE NOTED.

11. VERTICAL OR HORIZONTAL PIPE FITTINGS MAY BE OMITTED FROM THE DRAWINGS FOR CLARITY. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL PIPE FITTINGS AS REQUIRED FOR COMPLETE AND OPERABLE PIPE INSTALLATIONS.

12. PROVIDE ALL CONNECTING PIECES AND TRANSITION PIECES REQUIRED TO MAKE FINAL PIPING CONNECTIONS.

13. CONTRACTOR SHALL COMPLY WITH NO LEAD REGULATIONS FOR WATER INFRASTRUCTURE.

14. ALL WORK SHALL BE IN ACCORDANCE WITH VIRGINIA DEPARTMENT OF HEALTH REGULATIONS FOR DRINKING WATER TREATMENT FACILITIES.

15. ALL UTILITIES THAT REQUIRE RELOCATION BUT ARE NOT SHOWN ON THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO DEMOLITION WORK. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.

16. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CONFINED SPACE ENTRY REGULATIONS.

17. CONTRACTOR SHALL BE INFORMED AND COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT. ALL COSTS TO COVER LINES, FLAG LINES, OR DISCONNECT SERVICE SHALL BE AT THE CONTRACTORS EXPENSE.

18. MAINTAIN OVERHEAD AND UNDERGROUND ELECTRICAL SERVICES AND ALL OTHER UTILITIES DURING ENTIRE CONSTRUCTION PERIOD. ALL UTILITY OUTAGES TO BE COORDINATED WITH THE OWNER.

19. CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL SITE AND LABOR SAFETY AND SANITARY PROVISIONS ON SITE. LOCATION OF SANITARY PROVISIONS SHALL BE IN A DISCRETE LOCATION. COORDINATE WITH THE OWNER.

20. THE CONTRACTOR SHALL BE FULLY LIABLE FOR REPAIR OF ANY DAMAGES ON PUBLIC OR PRIVATE PROPERTY CAUSED BY HIS CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REPAIR AND REPLACE ALL DAMAGED PROPERTY IN KIND, INCLUDING PAVEMENT, STONE, DITCHES, STORM CULVERTS, FENCING, ETC.

21. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF HEALTH (VDH) WATERWORKS REGULATIONS, THE VIRGINIA SEWAGE COLLECTION AND TREATMENT (SCAT) REGULATIONS, AND THE LATEST EDITION OF THE TOWN OF CULPEPER RULES AND REGULATIONS, WATER AND SANITARY SEWER CONSTRUCTION SPECIFICATIONS AND STANDARDS.

22. THE CONTRACTOR SHALL PROTECT EXISTING PAVED SURFACES. ANY DAMAGED PAVEMENT SHALL BE REPAIRED TO MATCH EXISTING. TRACKED EQUIPMENT WILL NOT BE ALLOWED ON PAVED SURFACES. ANY PAVEMENT MARKINGS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN KIND BY A PAVEMENT MARKING CONTRACTOR FROM THE VDOT PRE-QUALIFICATION LIST.

AFF	ABOVE FINISHED FLOOR	HB	HORIZONTAL BEND	RT	RIGHT
AHD	AHEAD	HC	HANDICAP	R/W	RIGHT OF WAY
ARV	AIR RELEASE VALVE	HDPE	HIGH DENSITY POLYETHELENE	SAN	SANITARY SEWER
BC	BACK OF CURB	HK	HOOK	SBL	SOUTH BOUND LANE
BF	BLIND FLANGE	HWL	HIGH WATER LEVEL	SD	STORM DRAIN
BFF	BASEMENT FINISHED FLOOR	ID	INNER DIAMETER	SDMH	STORM DRAIN MANHOLE
BM	BENCH MARK	INV	INVERT	SL	SLUDGE
BK	BACK	IPF	IRON PIPE FOUND	SQ	SQUARE
BOV	BLOW OFF VALVE	IRF	IRON PIN FOUND	S.S.	STAINLESS STEEL
BW	BOTTOM OF WALL	IRS	IRON PIN SET	SSMH	SANITARY SEWER MANHOLE
CATV	CABLE TELEVISION	JB	JUNCTION BOX	STA	STATION
CG	CURB & GUTTER	LAT	LATERAL	STD	STANDARD
CIP	CAST IRON PIPE	LF	LINEAR FEET	STL	STEEL
CL	CENTER LINE	LP	LAMP POST	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	LT	LEFT	TBA	TO BE ABANDONED
CO	CLEAN OUT	LWL	LOW WATER LEVEL	TBR	TO BE REMOVED
CONC	CONCRETE	MF	MONUMENT FOUND	TC	TOP OF CURB
COR	BOUNDARY LINE CORNER	MH	MANHOLE	TSV	TAPPING SLEEVE AND VALVE
CPP	CORRUGATED PLASTIC PIPE	NBL	NORTH BOUND LANE	TW	TOP OF WALL
CY	CUBIC YARDS	NC	NORMALLY CLOSED	TYP	TYPICAL
DI	DROP INLET	NF	NAIL FOUND	UG	UNDERGROUND
DIA	DIAMETER	NO	NORMALLY OPEN	UGT	UNDERGROUND TELEPHONE
DIP	DUCTILE IRON PIPE	NS	NAIL SET	UGU	UNDERGROUND UTILITY
EF	EACH FACE	NIC	NOT IN CONTRACT	UON	UNLESS OTHERWISE NOTED
EL	ELEVATION	NTS	NOT TO SCALE	VB	VERTICAL BEND
ELEC	ELECTRIC	OC	ON CENTER	VHD	VEHICLES PER DAY
EOP	EDGE OF PAVEMENT	PE	POLYETHYLENE	W	WATER
EOTL	EDGE OF TRAVEL LANE	PF	PLANT FLOW	WAS	WASTE ACTIVATED SLUDGE
EQPT	EQUIPMENT	PGL	PROFILE GRADE LINE	WL	WATER LINE
EW	EACH WAY	PP	POWER POLE	WM	WATER METER
EX OR EXIST	EXISTING	PROP	PROPOSED	WSE	WATER SURFACE ELEVATION
FF	FINISHED FLOOR	PRV	PRESSURE RELIEF VALVE	WT	WATERTIGHT
FH	FIRE HYDRANT	PS	PLANTED STONE FOUND	WWF	WOVEN WIRE FABRIC
FM	FORCE MAIN	PVC	POLYVINYL CHLORIDE	XING	CROSSING
FL	FLOURIDE	PVMT	PAVEMENT	YDS	YARDS
FOC	FACE OF CURB	RAS	RETURN ACTIVATED SLUDGE	YH	YARD HYDRANT
GALV	GALVANIZED	RCP	REINFORCED CONCRETE PIPE		
GV	GATE VALVE	REQ'D	REQUIRED		

1. THE SIZE OF THE SYMBOLS MAY VARY FROM THOSE SHOWN.
2. ALL SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT BE USED.

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M:\219044 TcCulpeper WTP Upgrade\219044.00 Filter Trough Replacement\904400C_EX-1.dwg

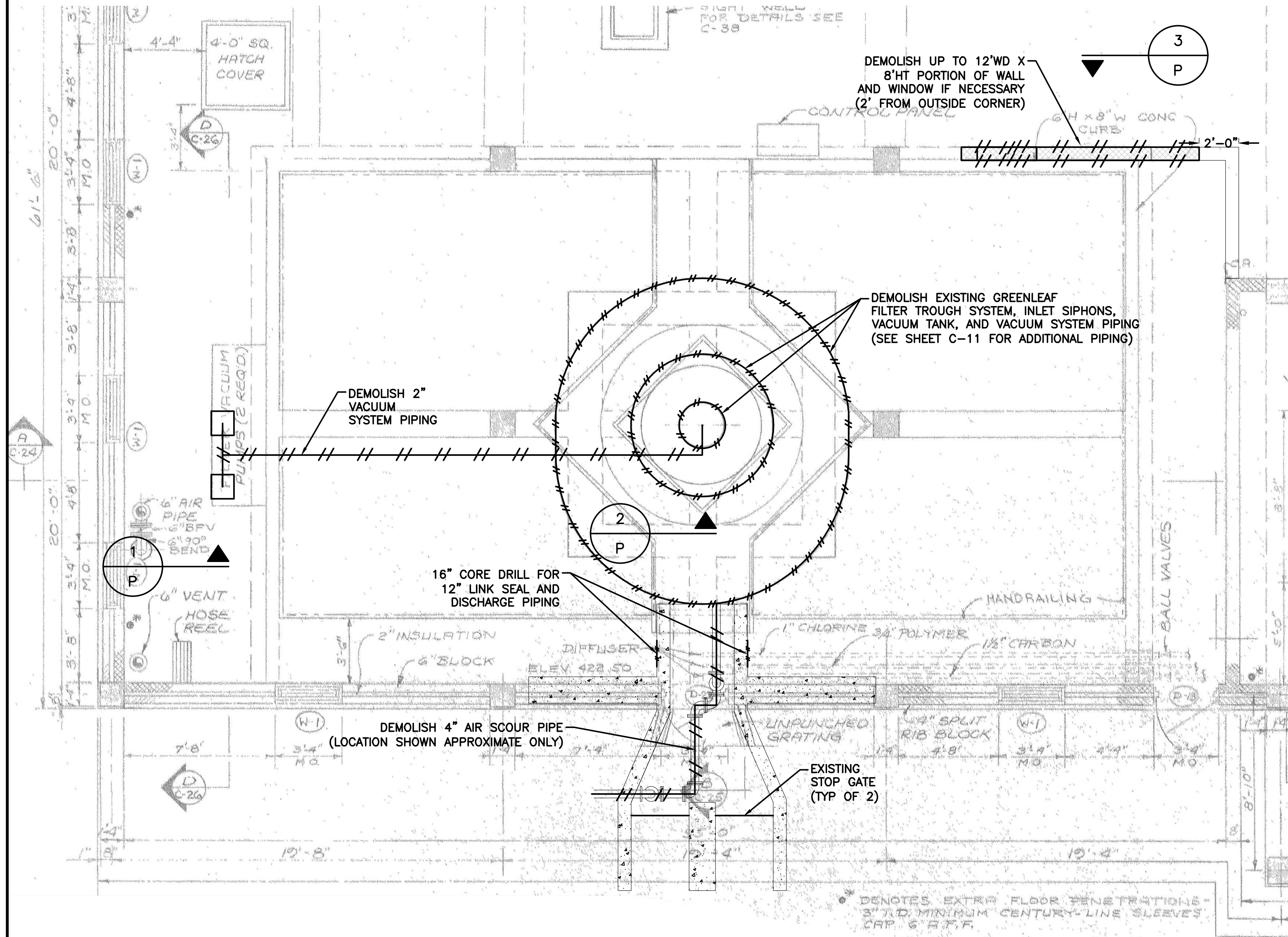


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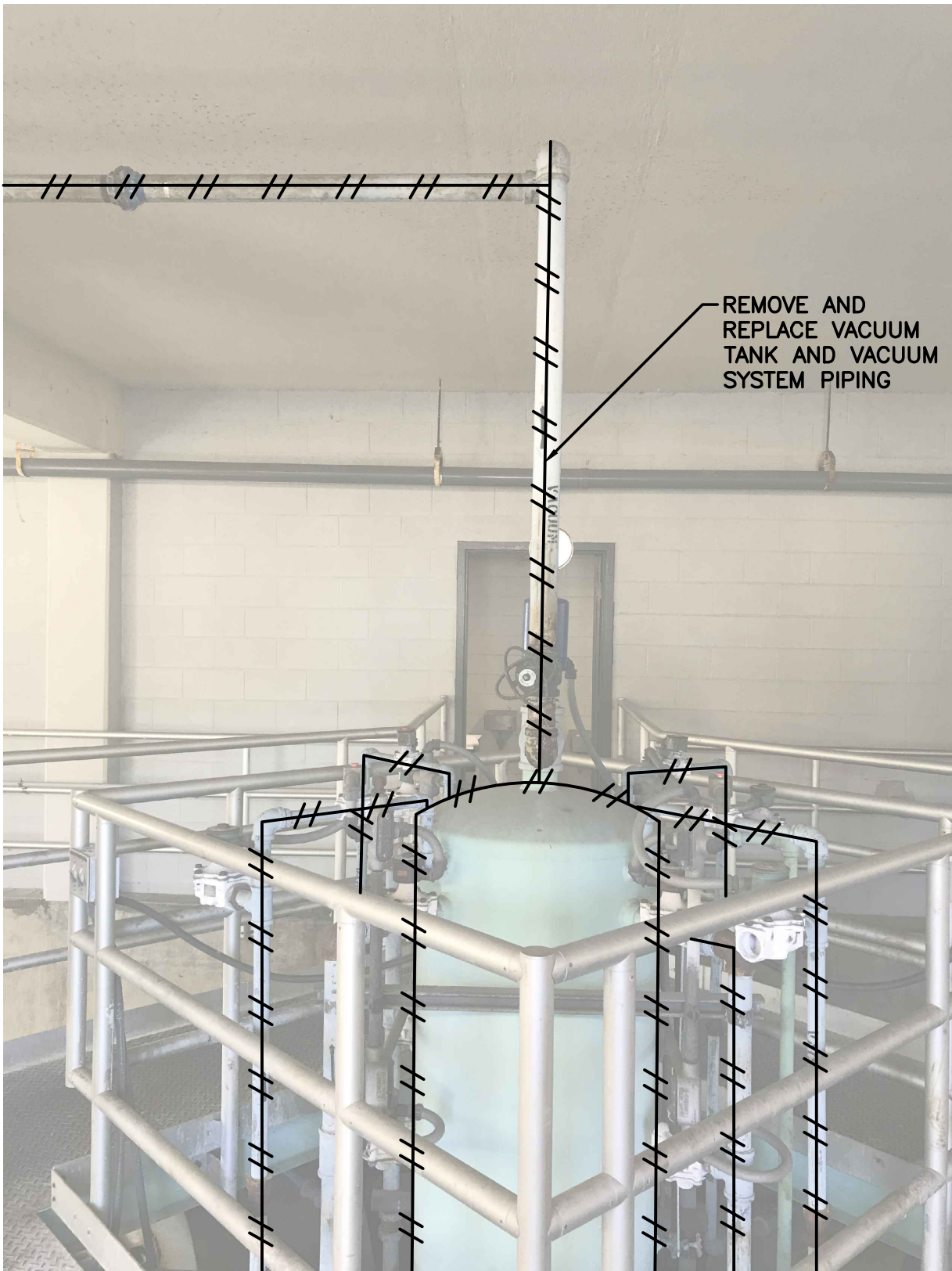


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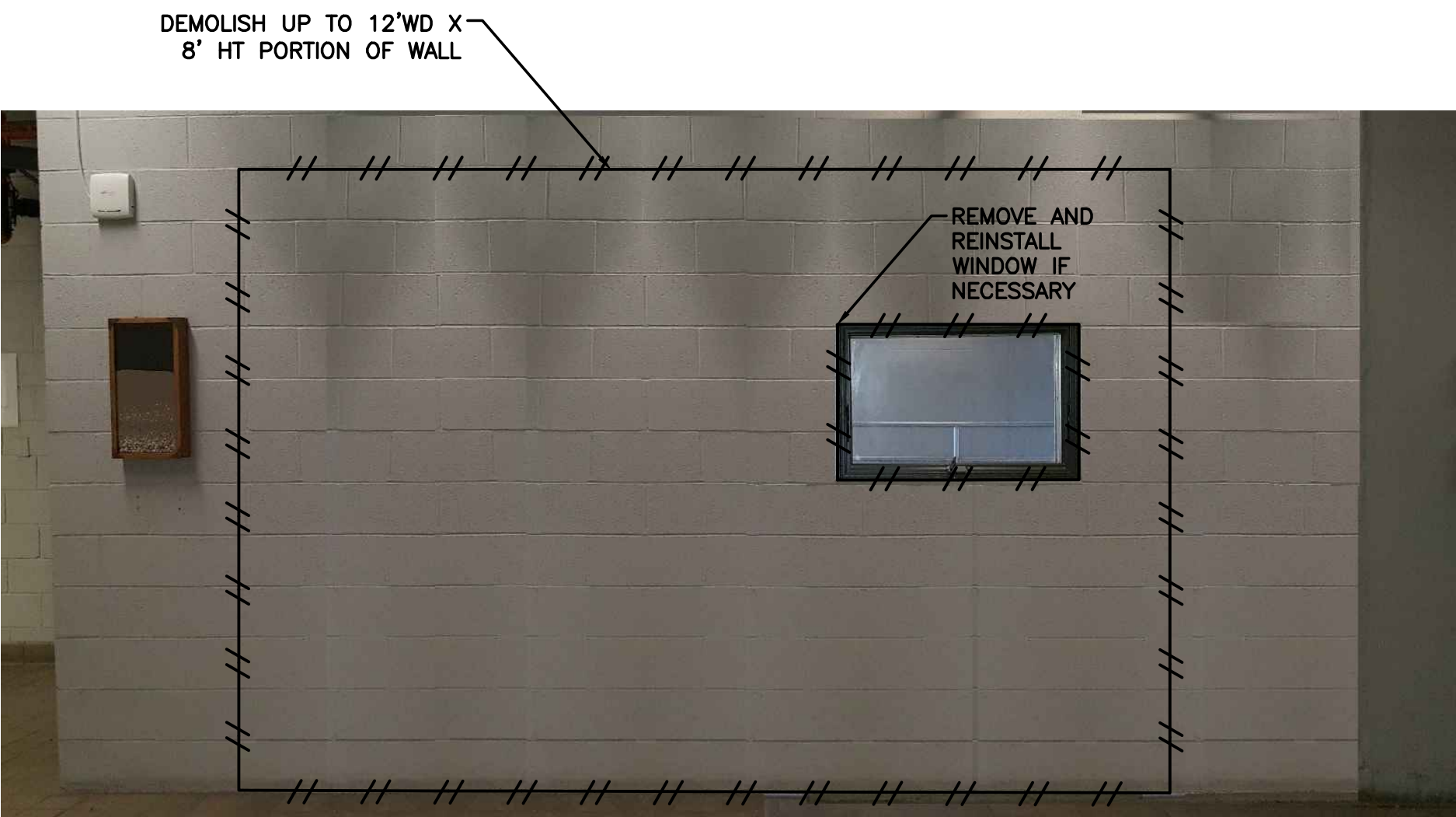
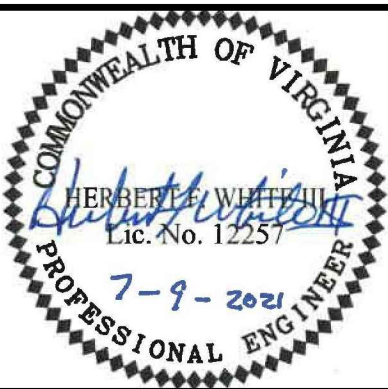


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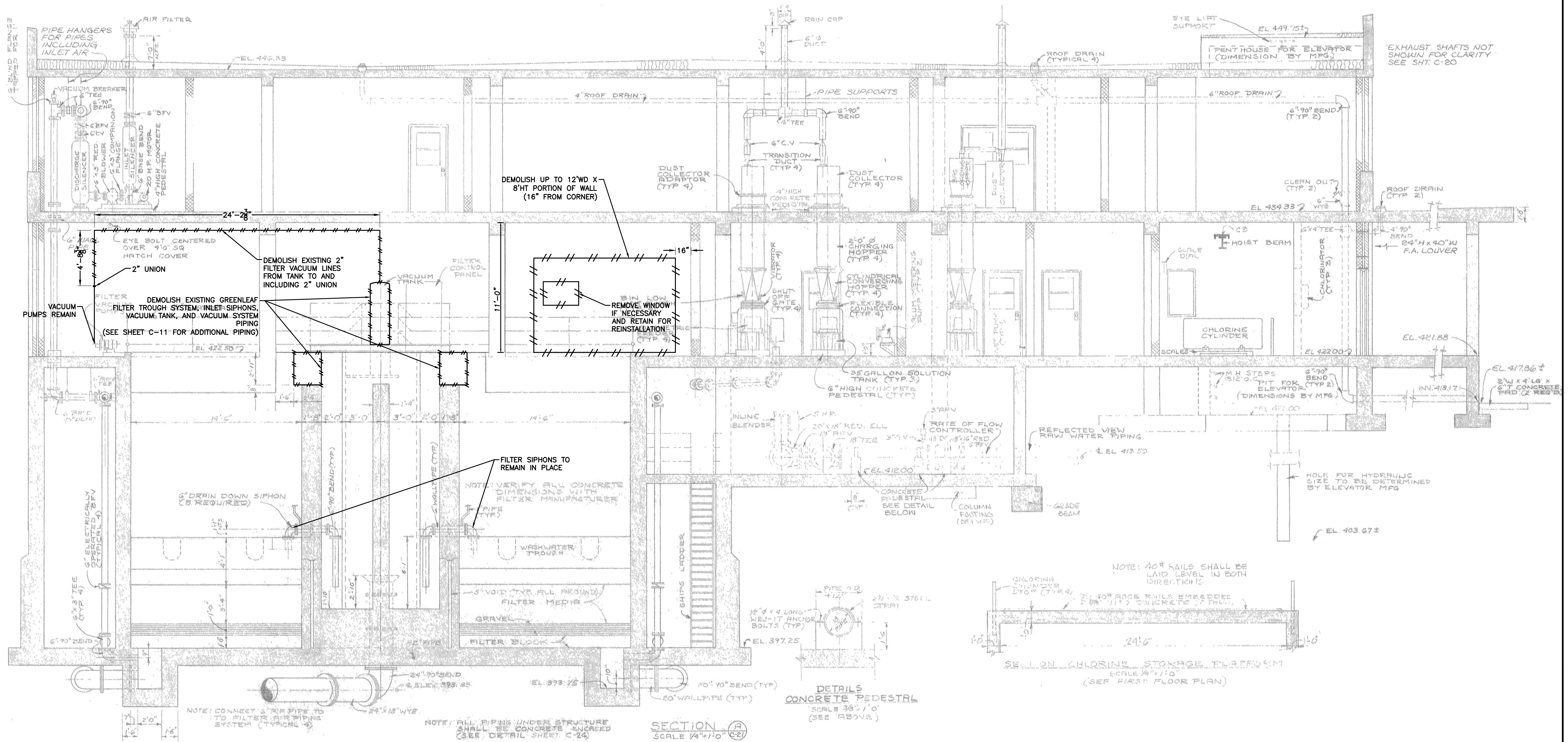
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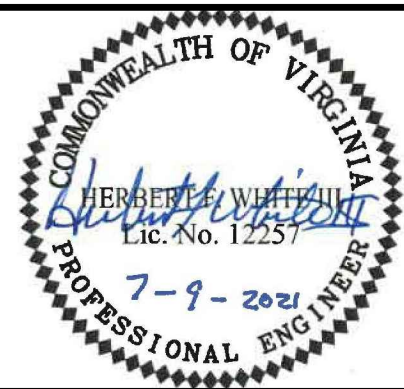
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DIHR BY: HFW	WWA NUMBER: 219044.00	FILE NAME: 904400C_EX-1.dwg	SHEET NUMBER: 3 of 12
DISCIPLINE: CIVIL	SCALE: H: 1/4"=1'-0" V: N/A	DATE: 7/9/2021	



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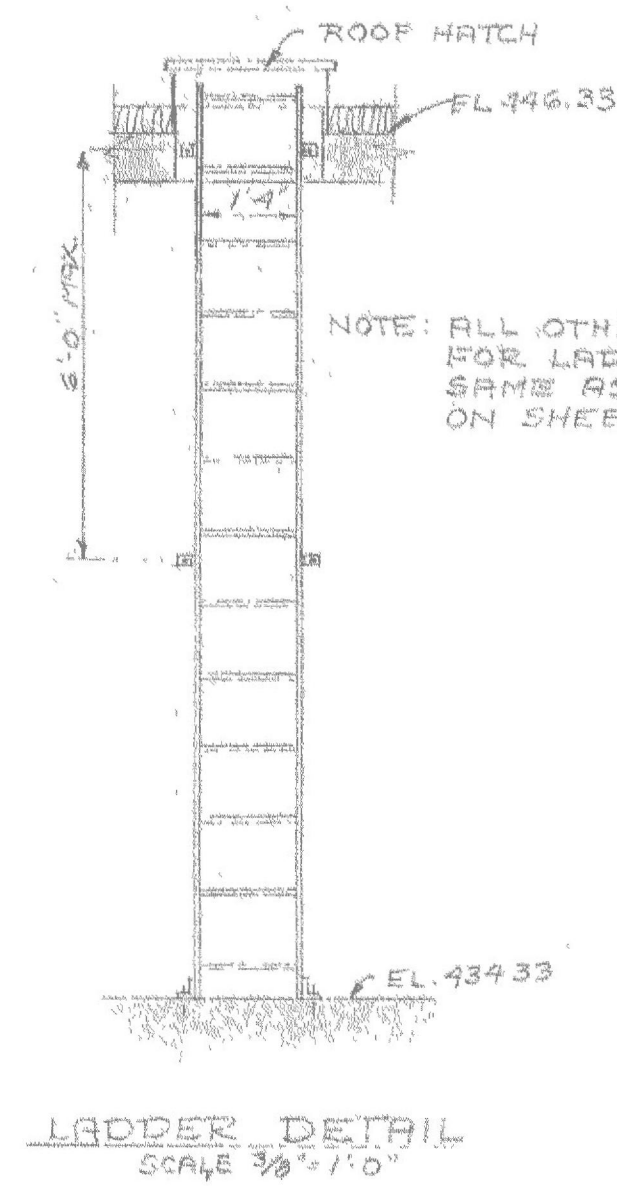


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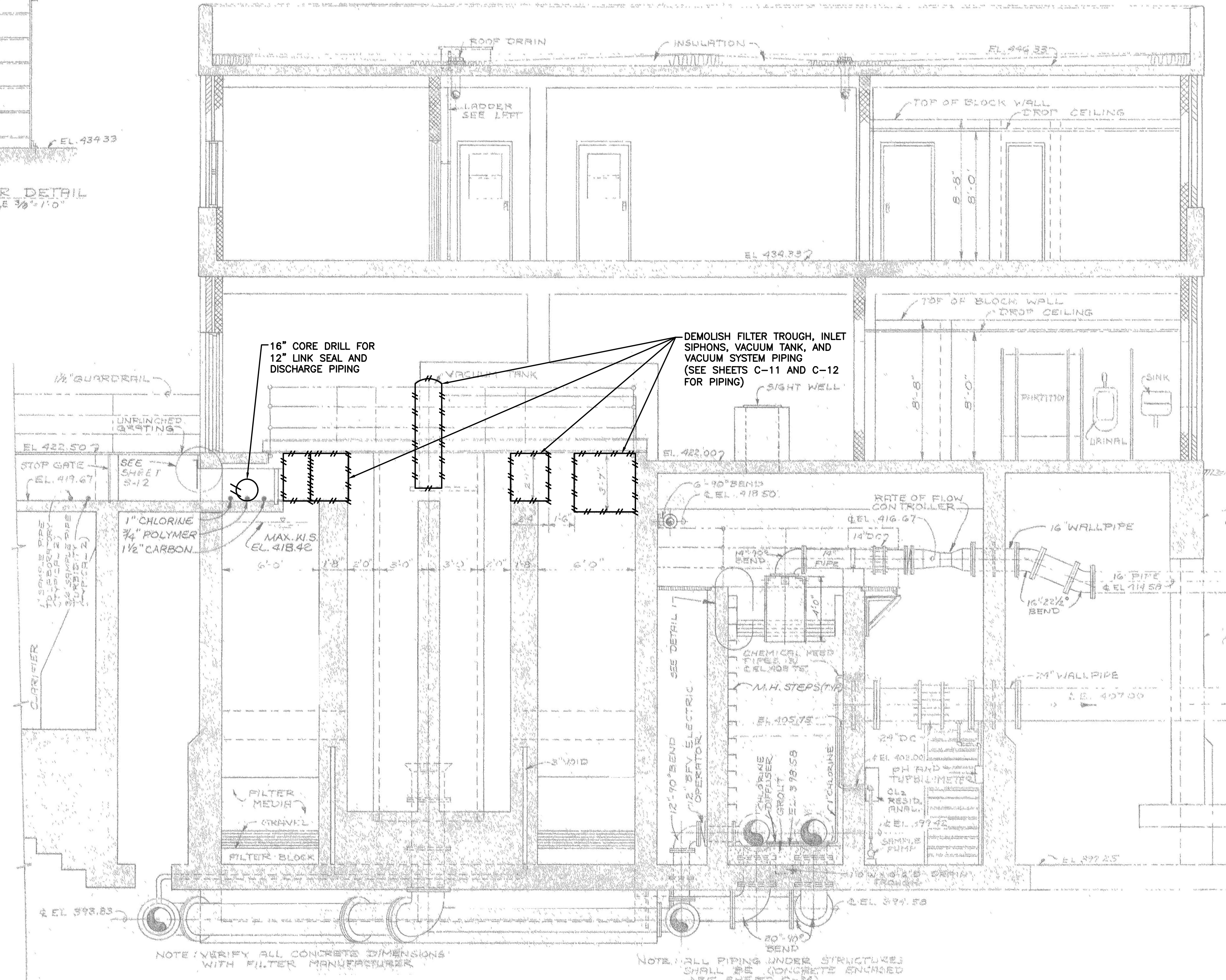


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DIHR BY: HFW	WVA NUMBER: 219044.00	SHEET NUMBER: 4 of 12
FILE NAME: 904400C_EX-2.dwg	DISCIPLINE: CIVIL	DATE: 7/9/2021
SCALE: H: 1/4"=1'-0" V: N/A		

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LADDER DETAIL
SCALE 3/8"=1'-0"

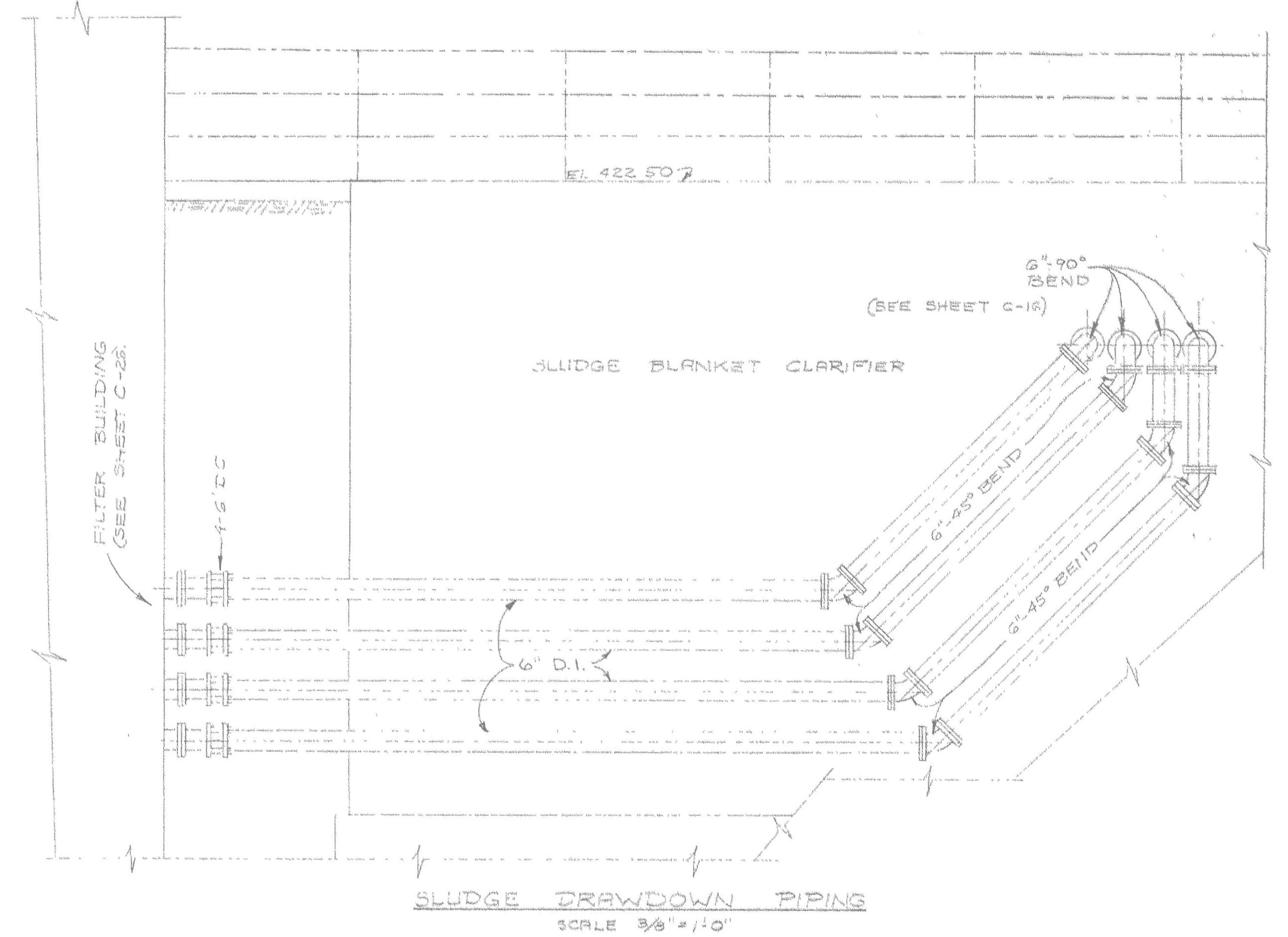


NOTE: VERIFY ALL CONCRETE DIMENSIONS WITH FILTER MANUFACTURER

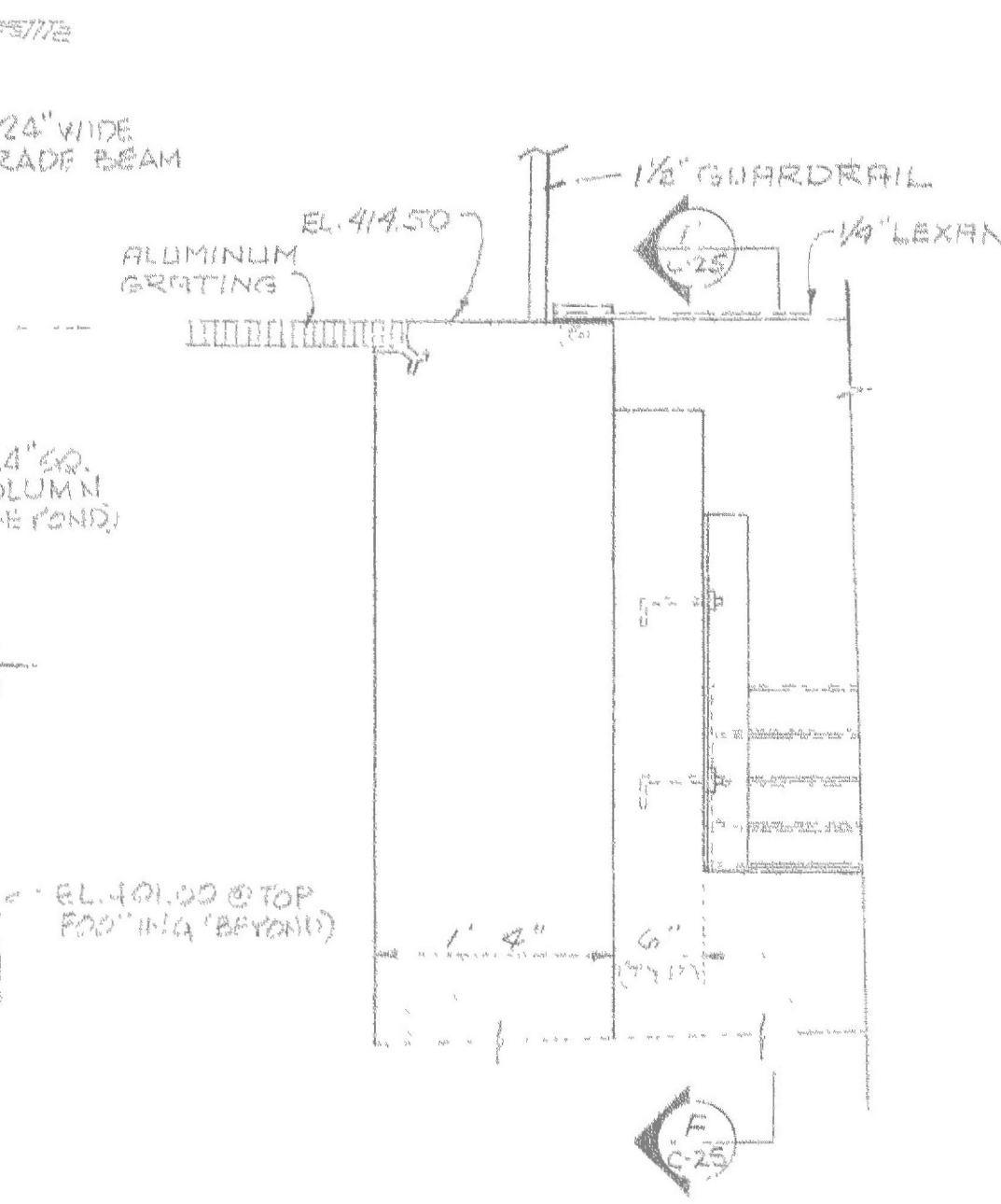
NOTE: ALL PIPING UNDER STRUCTURES SHALL BE CONCRETE ENCASED (SEE SHEET C-24)

NOTE: INSTALL M.H. STEPS ON 12\"/>

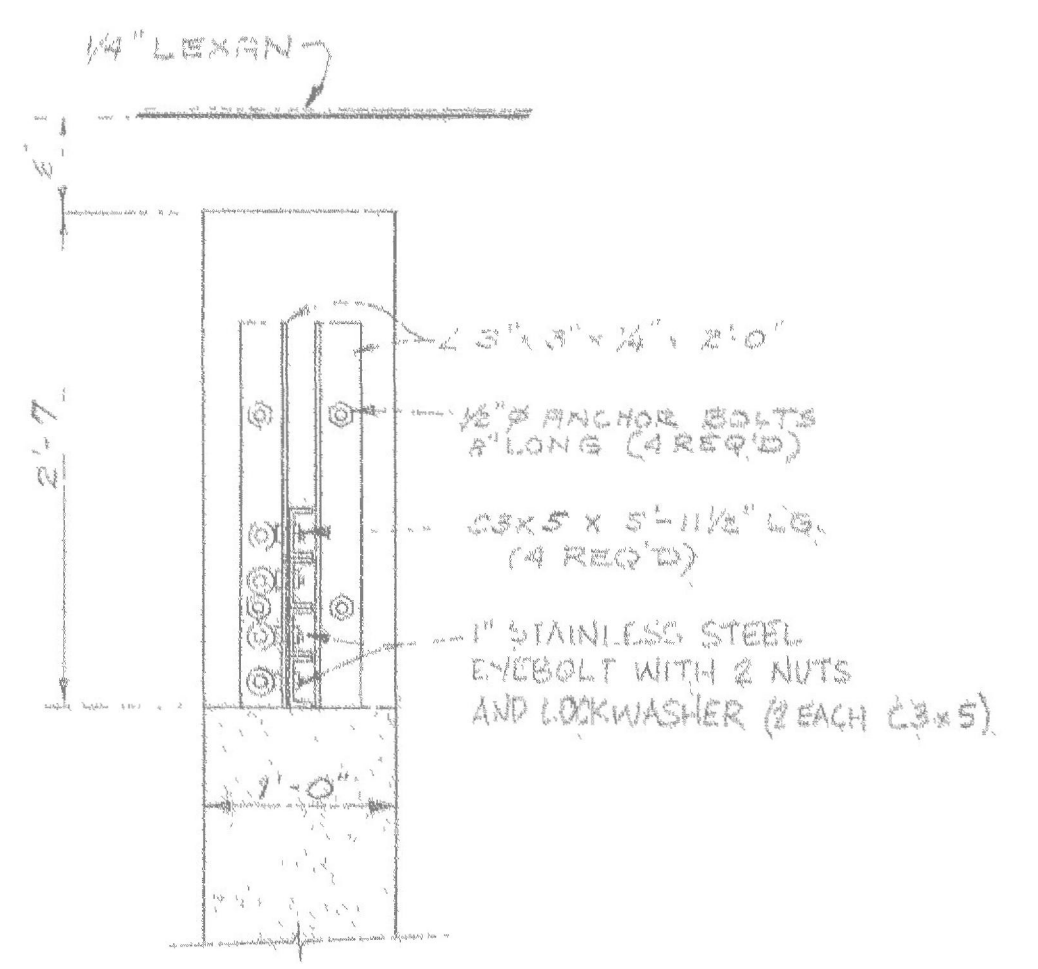
SECTION A
SCALE: 1/4\"/>



SLUDGE DRAWDOWN PIPING
SCALE 3/8\"/>

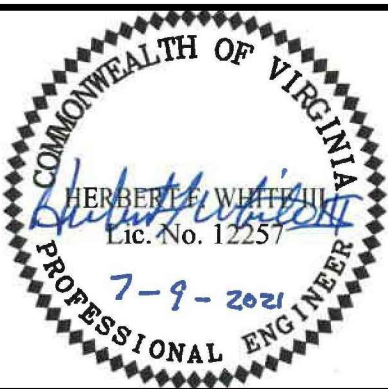


DETAIL 1
SCALE: 1\"/>



SECTION B
SCALE: 1\"/>

NO.	SHEET REVISION	BY	DATE	NO.	SHEET REVISION	BY	DATE



BID SET



DESIGNED BY: HFW	PROJECT: WATER TREATMENT PLANT IMPROVEMENTS TOWN OF CULPEPER, VIRGINIA	SET REV. NO. -
DRAWN BY: DJC	TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN SECTION B	DRAWING NUMBER: C-5
DIHR BY: HFW	WVA NUMBER: 219044.00	SHEET NUMBER: 5 of 12
FILE NAME: 904400C_EX-3.dwg	DISCIPLINE: CIVIL	DATE: 7/9/2021
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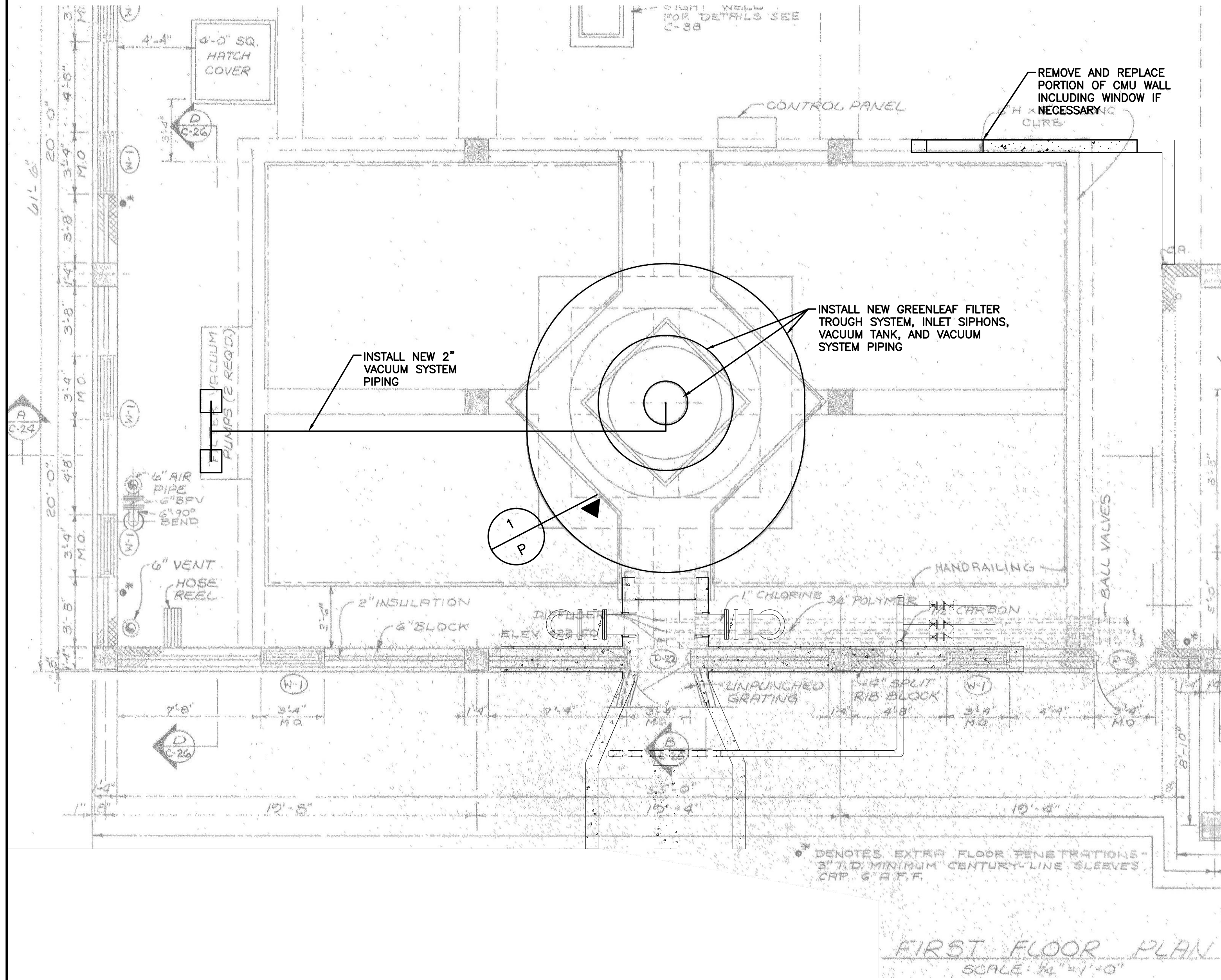
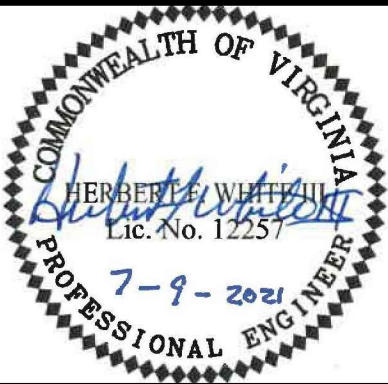


PHOTO 1

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NO.	SHEET REVISION	BY	DATE	NO.	SHEET REVISION	BY	DATE

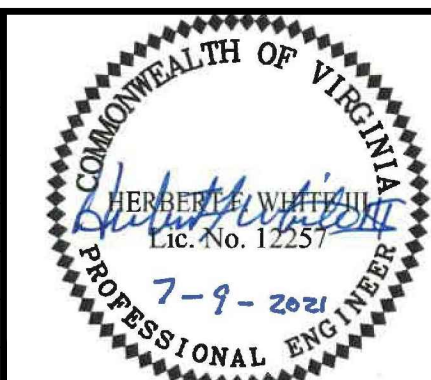
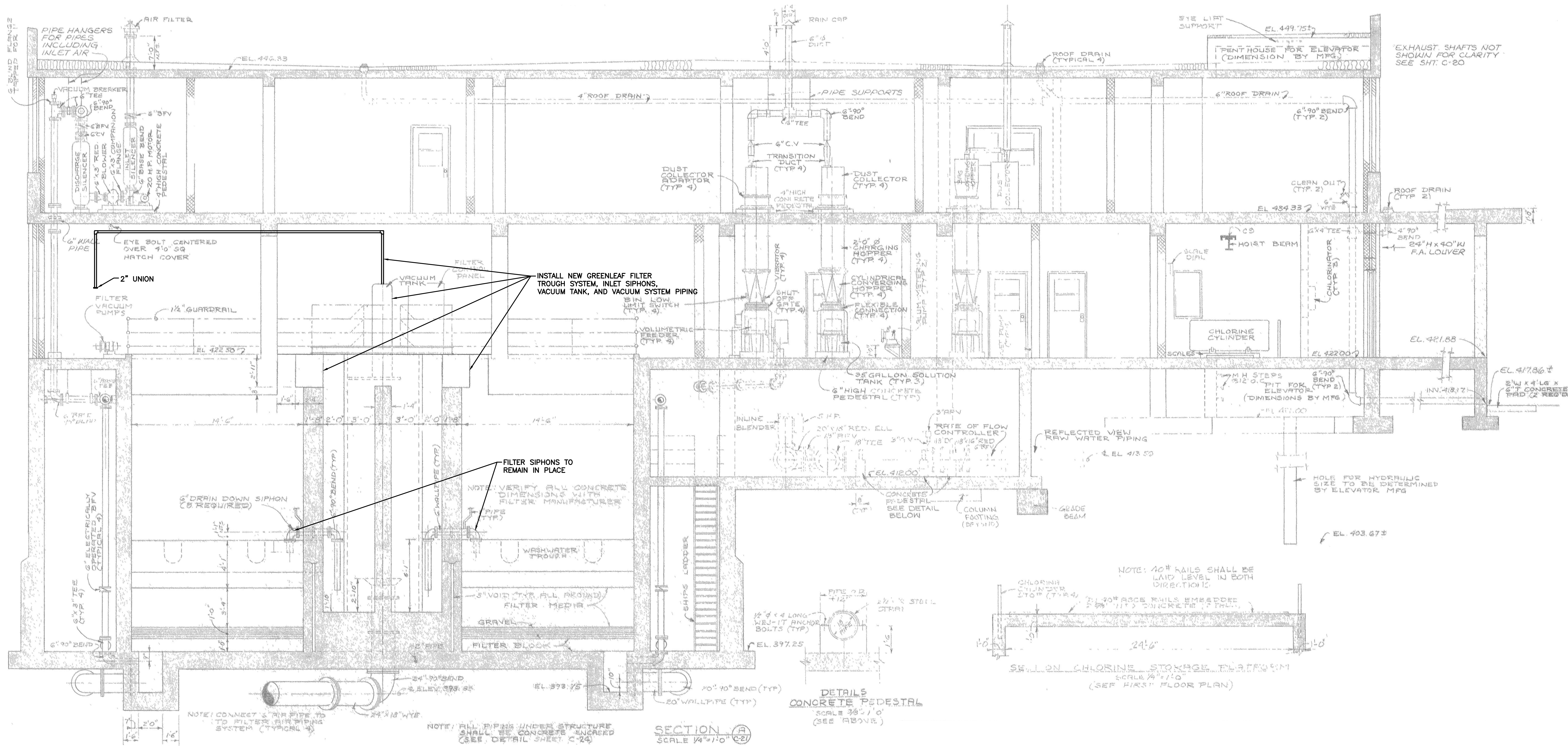


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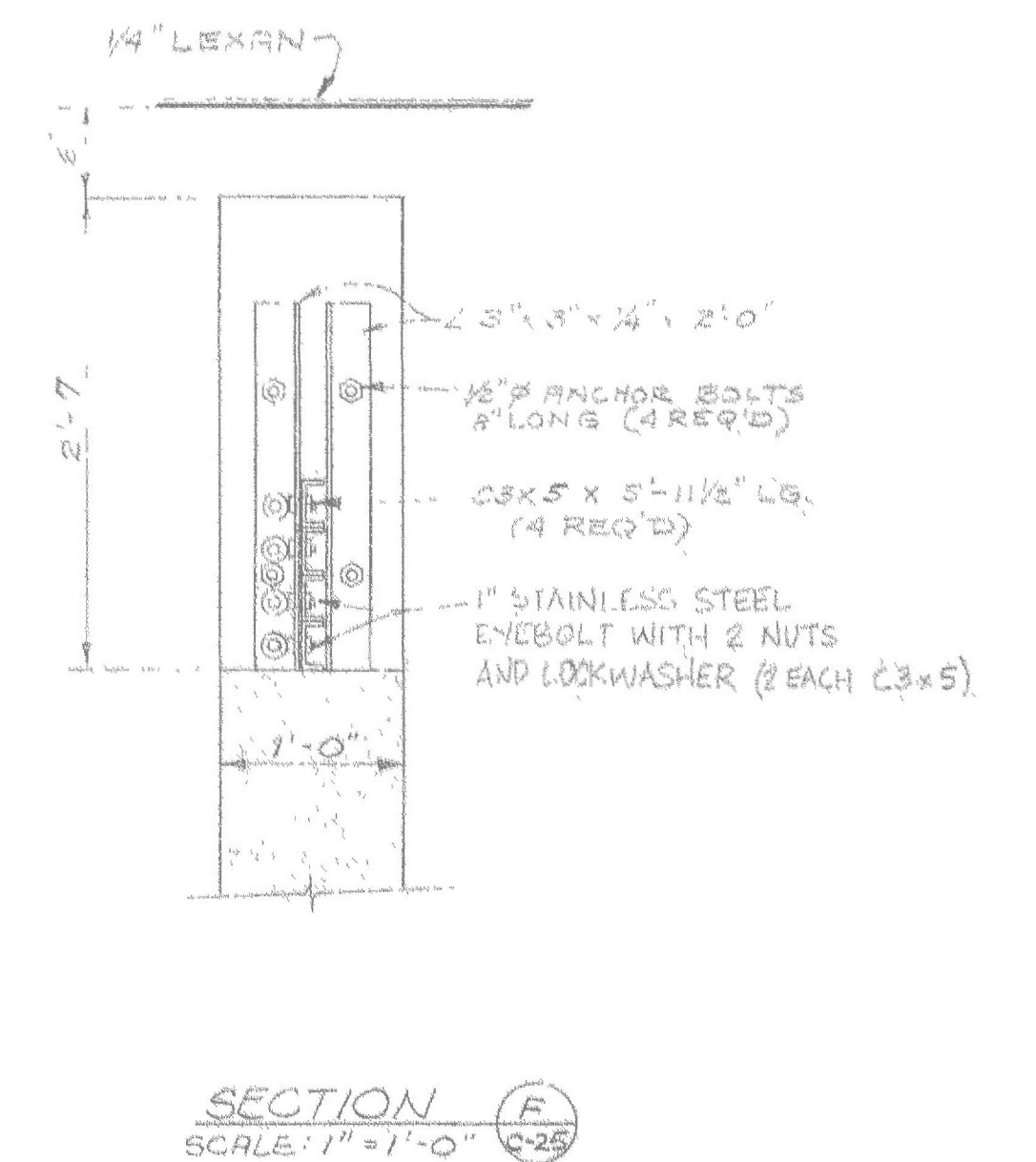
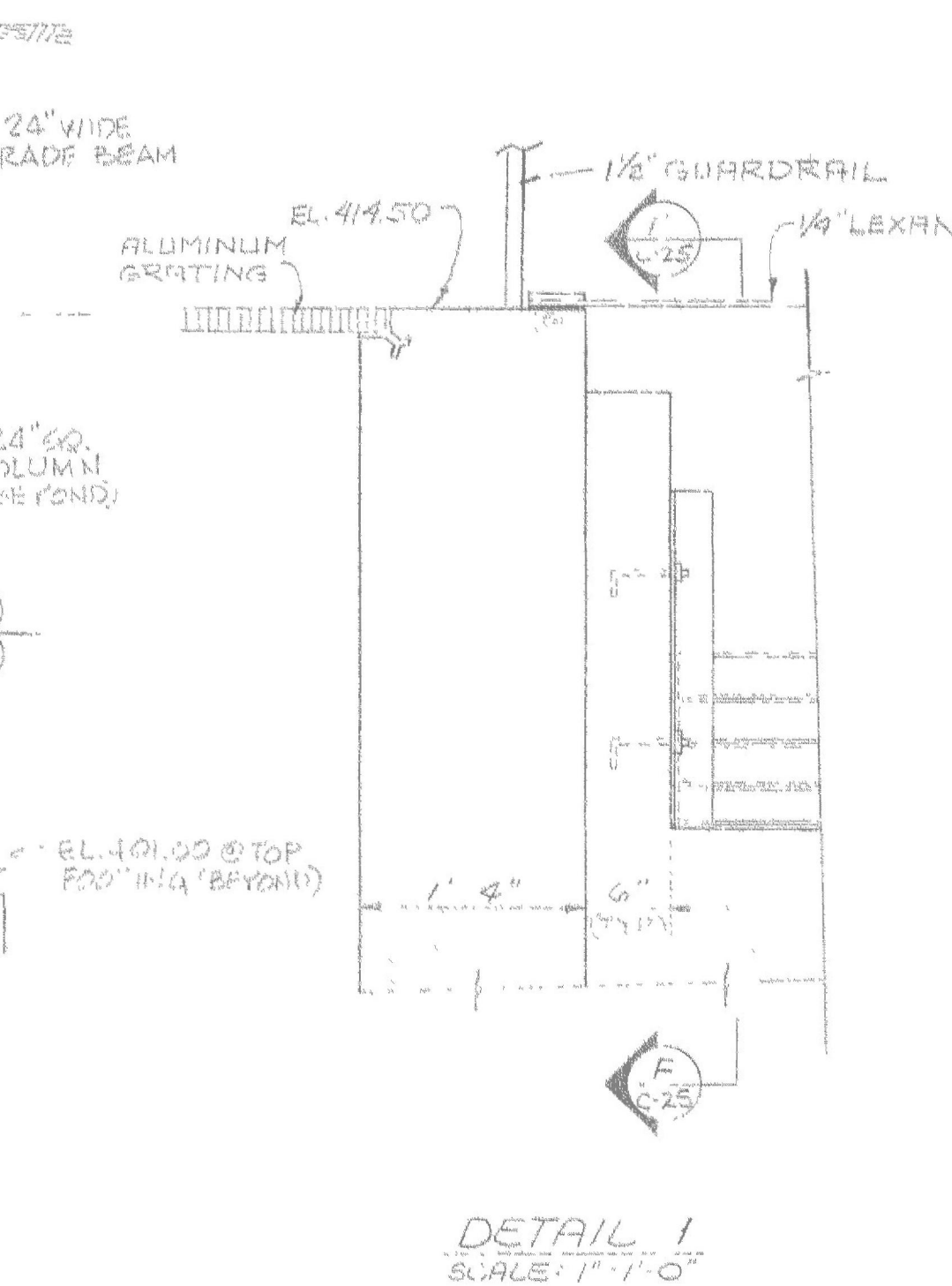
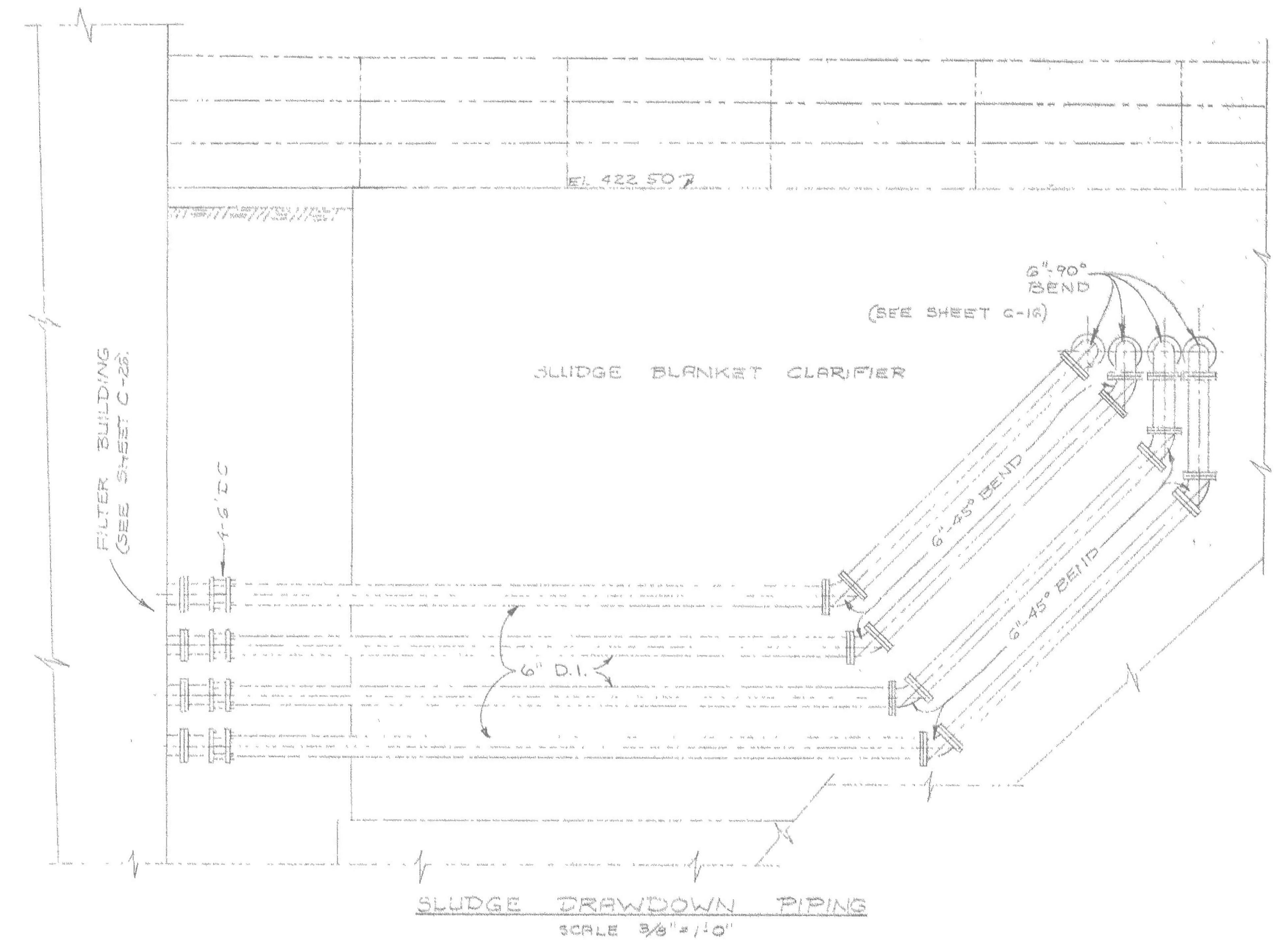
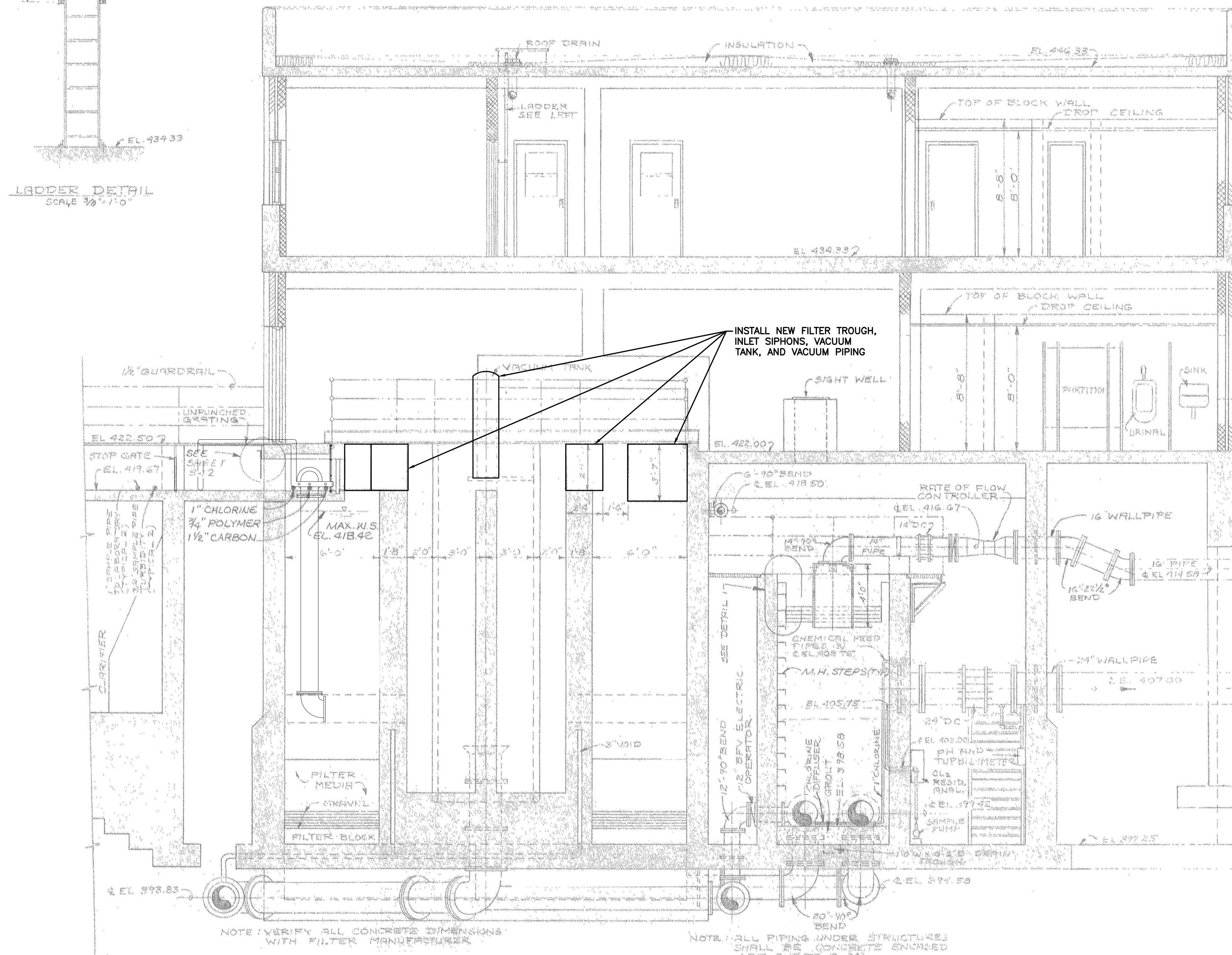
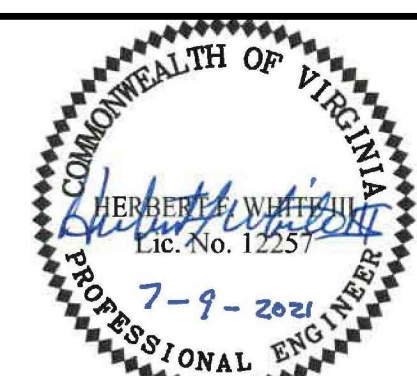
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DRAWN BY: DJC	TITLE: GREENLEAF FILTER TROUGH SYSTEM SECTION A	DRAWING NUMBER: C-8
DIHR BY: HFW	FILE NAME: 904400C_SP-2.dwg	SHEET NUMBER: 8 of 12
WWA NUMBER: 219044.00	DISCIPLINE: CIVIL	DATE: 7/9/2021
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ENGINEERS
SURVEYORS
PLANNERS

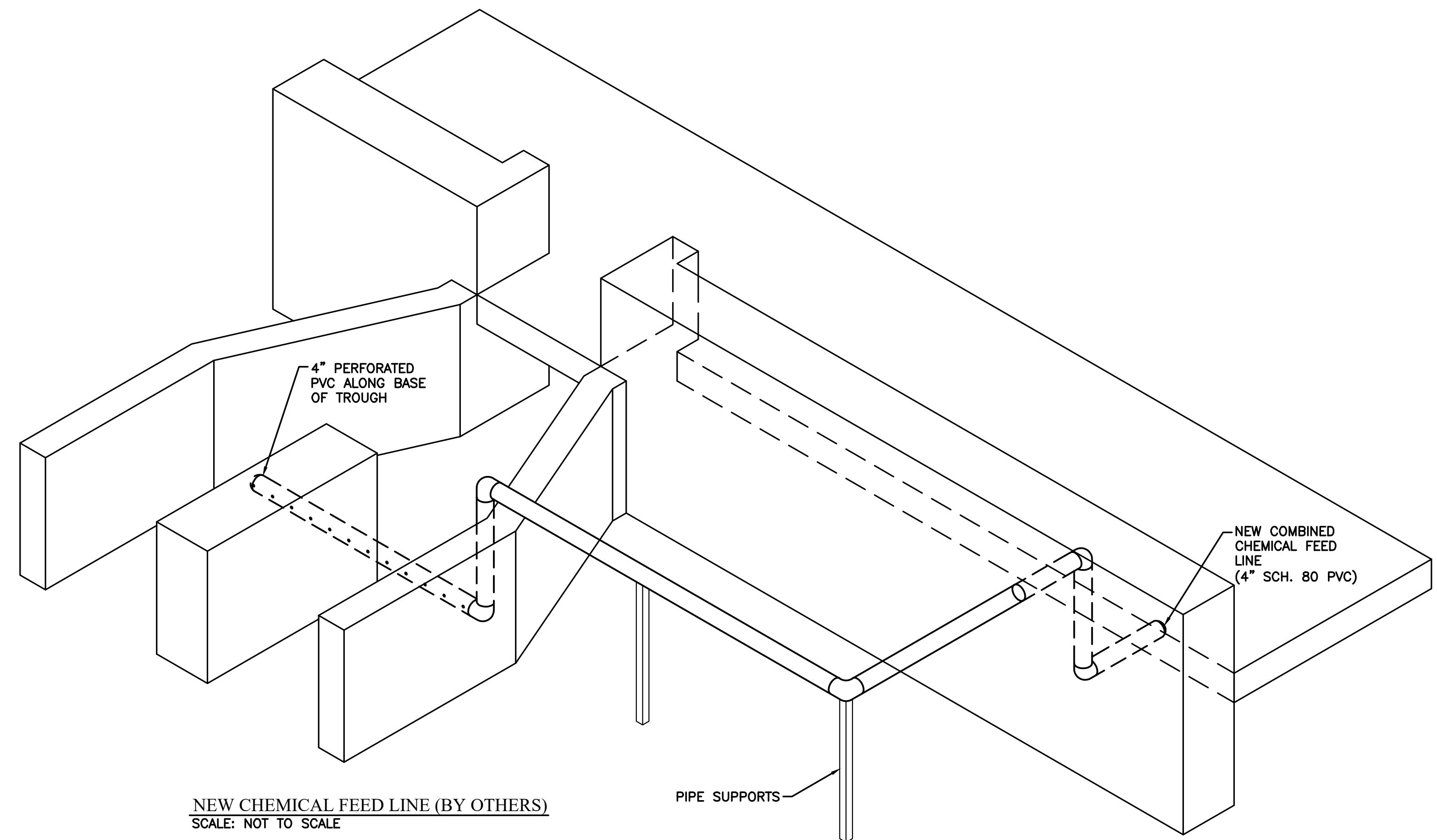
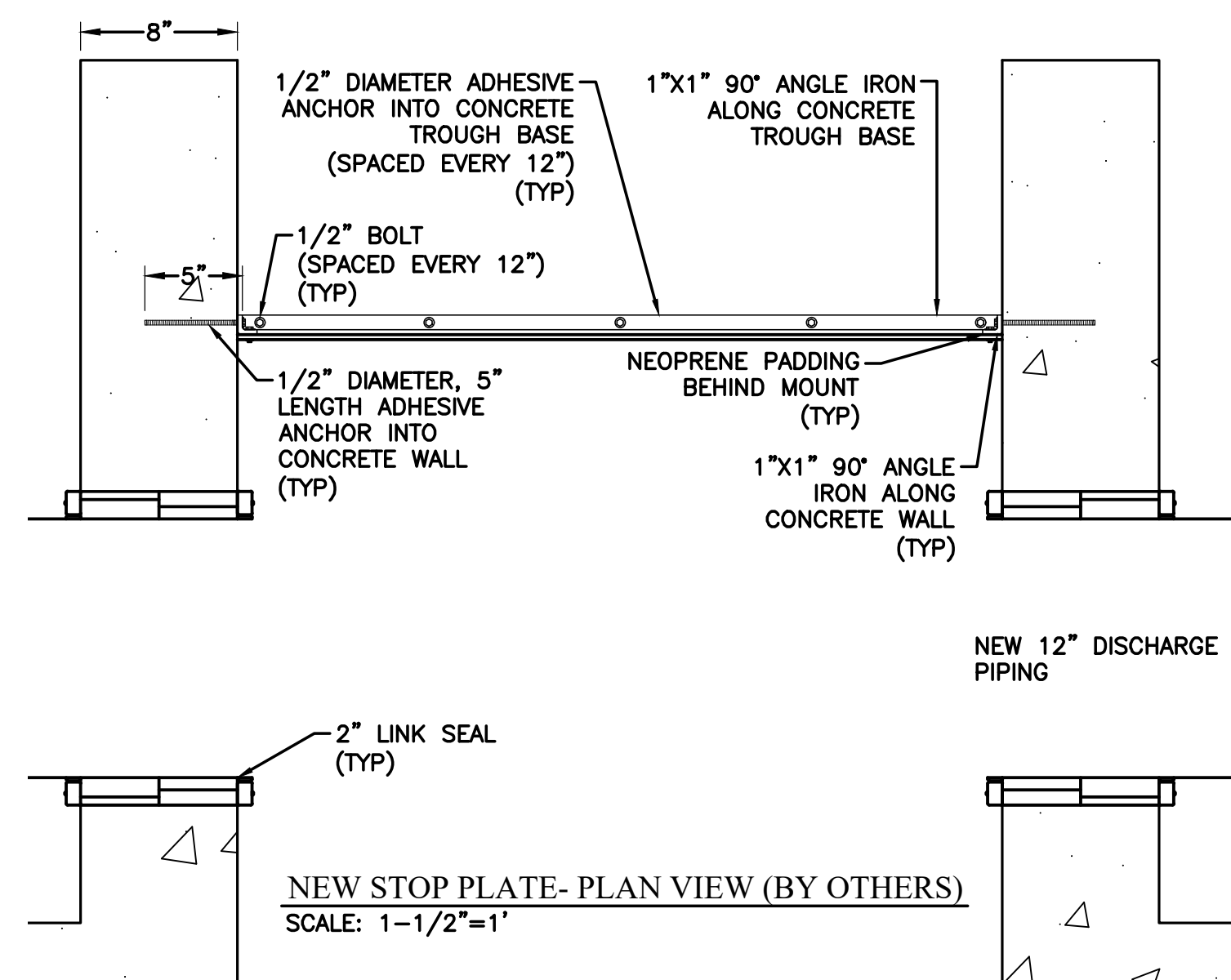
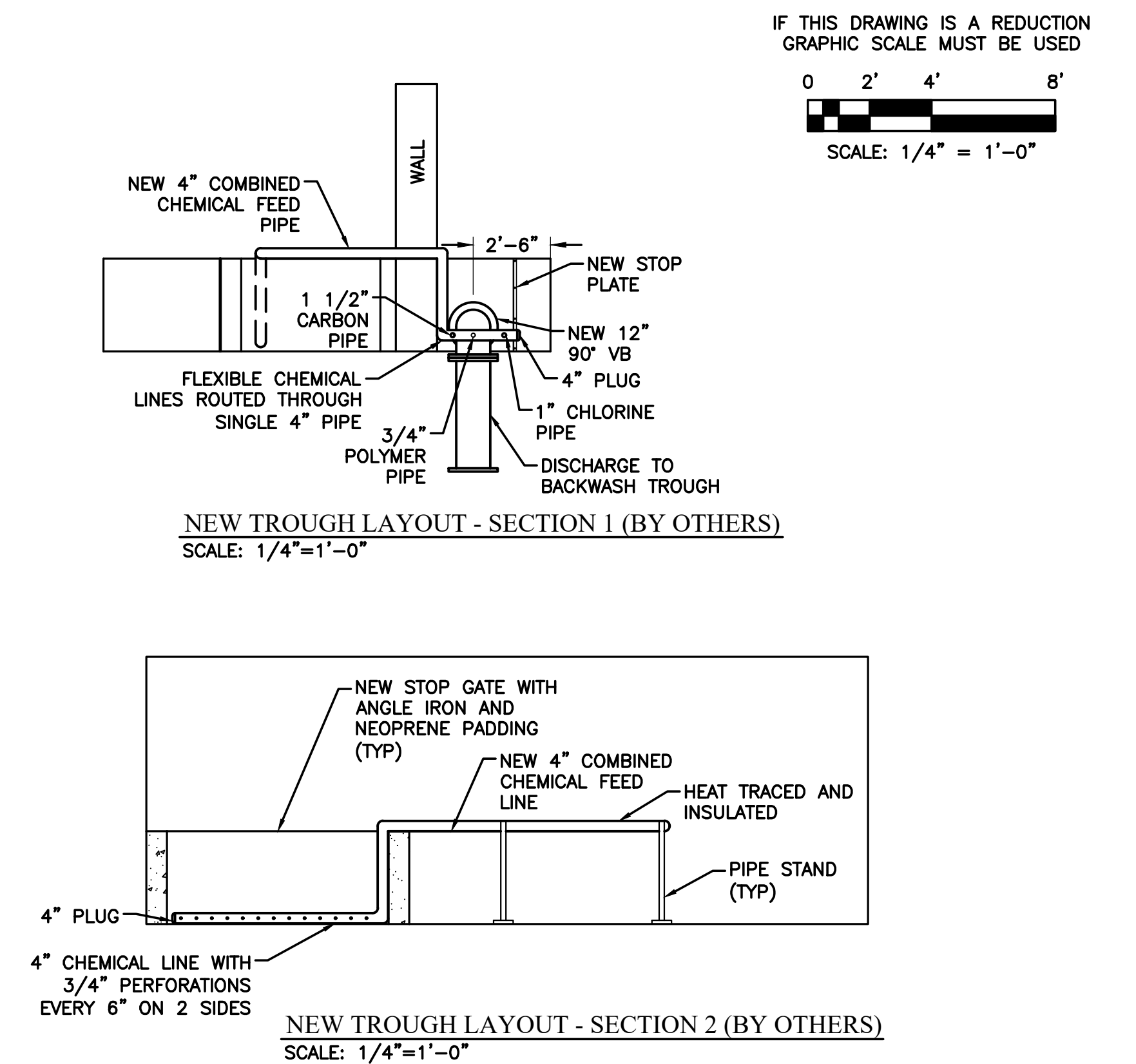
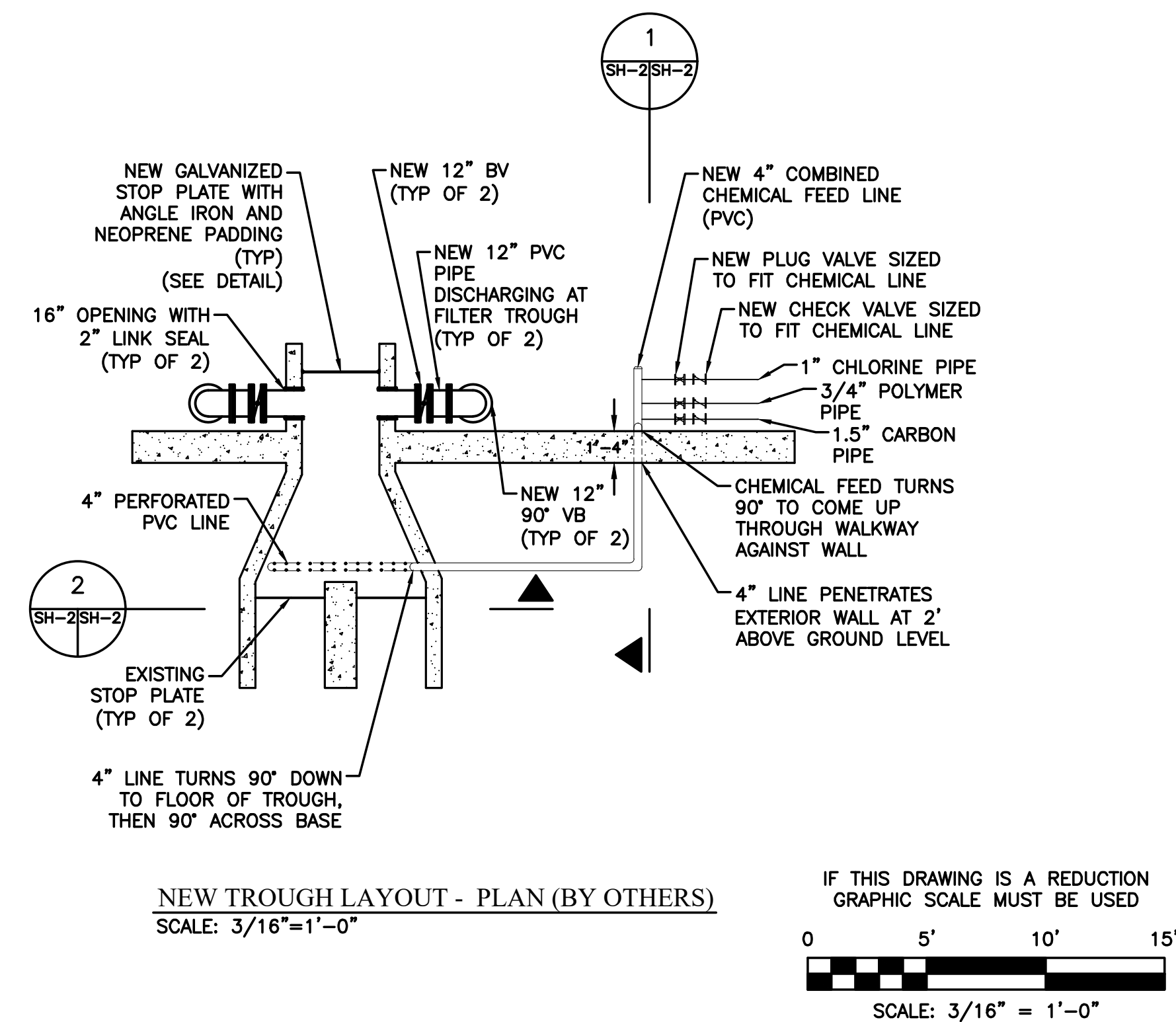
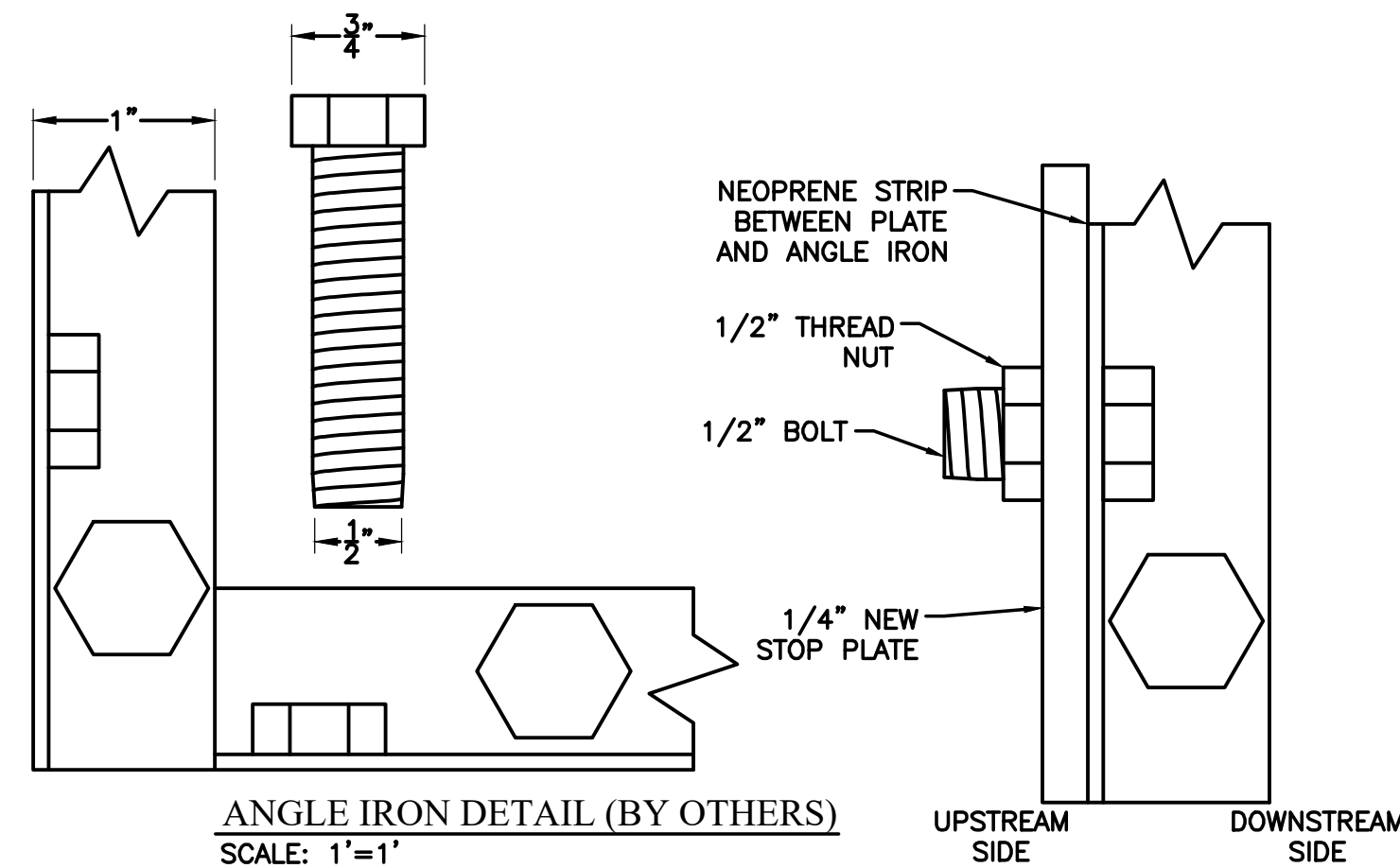
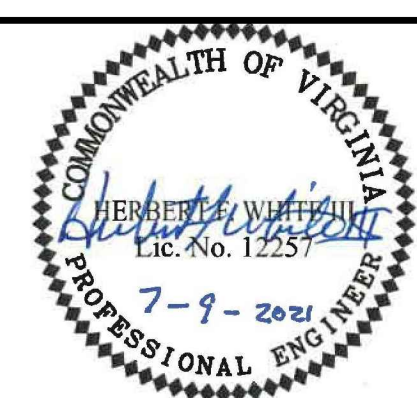
ASSOCIATES

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Lynchburg, VA 24502
Phone: 434.316.6080

3040 Avermore Sq Place
Charlottesville, VA 22911
Phone: 434.984.2700

www.wvassoassociates.net

DESIGNED BY: HFW	PROJECT: WATER TREATMENT PLANT IMPROVEMENTS				SET REV. NO. —
DRAWN BY: DJC	TOWN OF CULPEPER, VIRGINIA				DRAWING NUMBER: C-9
DIHR BY: HFW	TITLE: GREENLEAF FILTER TROUGH SYSTEM SECTION B				
WWA NUMBER: 219044.00	FILE NAME: 904400C_SP-3.dwg	DISCIPLINE: CIVIL	SCALE: H: 1/4"=1'-0"	DATE: 7/9/2021	SHEET NUMBER: 9 of 12

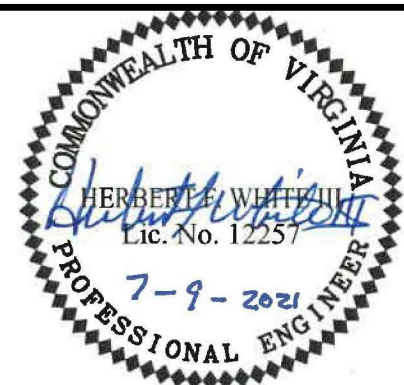
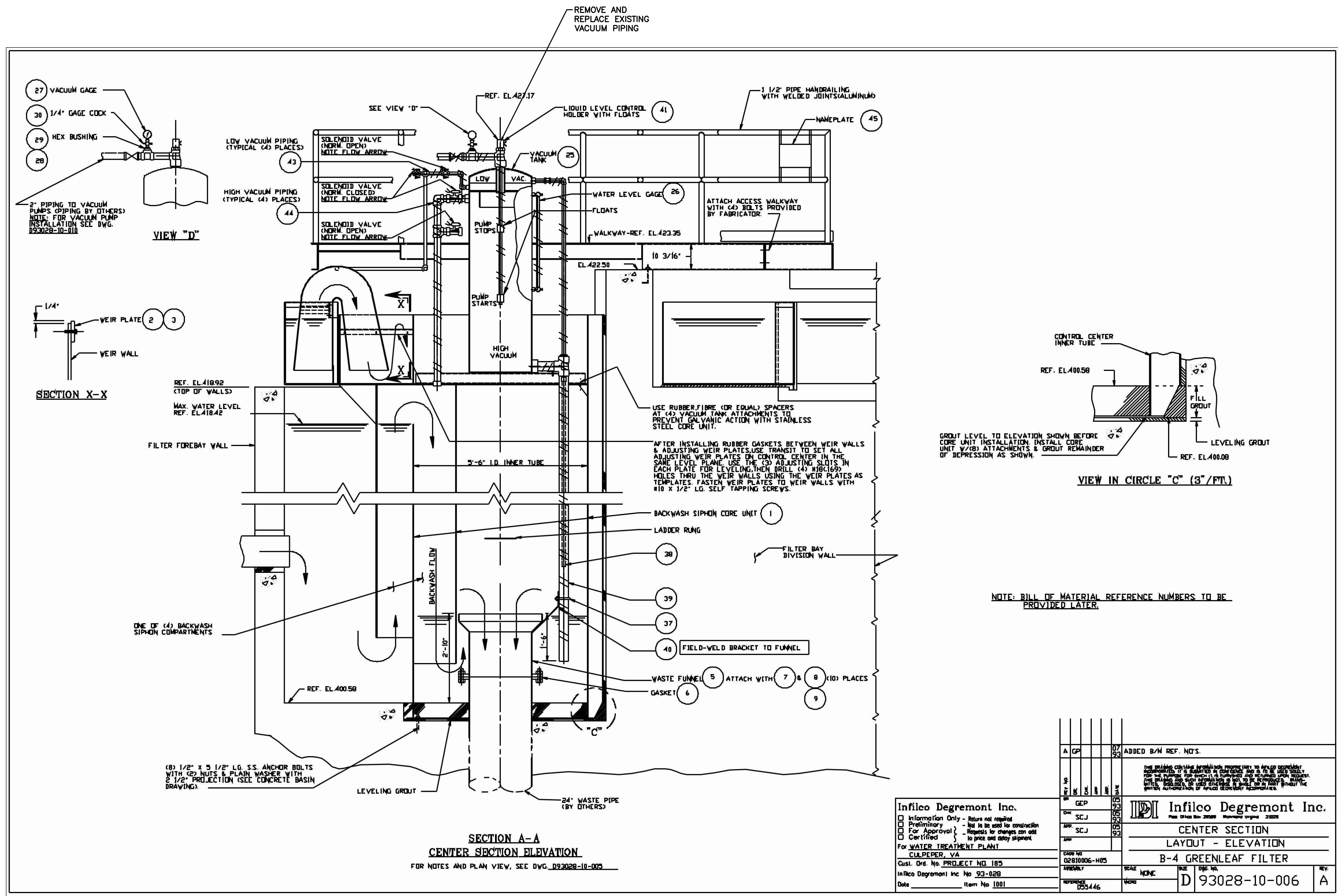
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DIHR BY: HFW	TITLE: GREENLEAF FILTER BYPASS AND CHEMICAL LINE DETAILS			SHEET NUMBER: 10 of 12
WWA NUMBER: 219044.00	FILE NAME: 904400C_DET-1.dwg	DISCIPLINE: CIVIL	SCALE: H: N/A V: N/A	DATE: 7/9/2021

M:\219044 Trough Replacement\219044.00 Filter Trough Replacement\904400C_DET-2.dwg

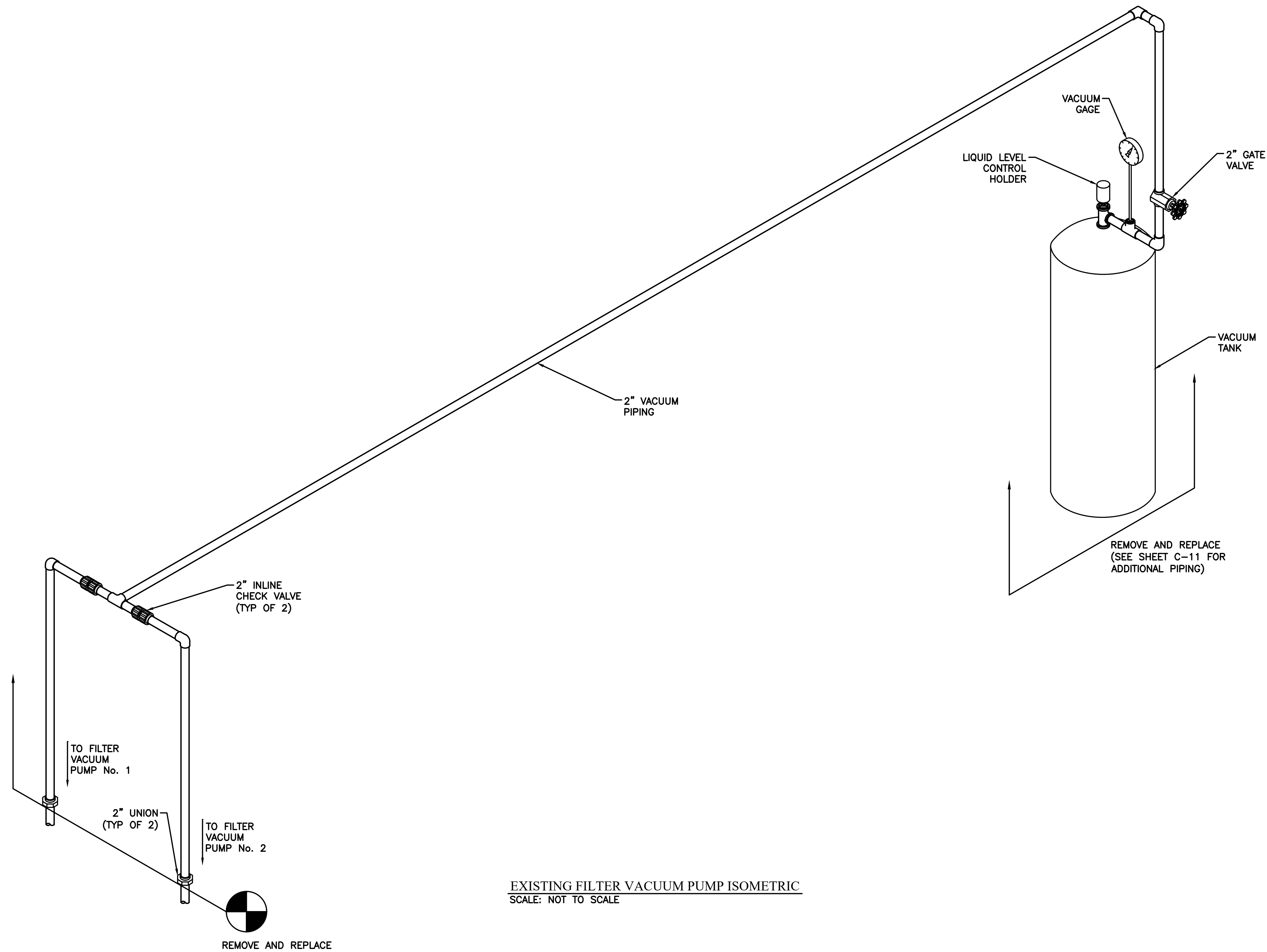


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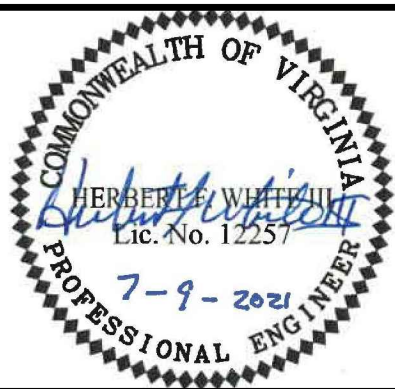


DESIGNED BY: HFW	PROJECT: WATER TREATMENT PLANT IMPROVEMENTS TOWN OF CULPEPER, VIRGINIA	SET REV. NO. -
DRAWN BY: DJC	TITLE: ORIGINAL SHOP DRAWINGS FOR WTP CONSTRUCTION	DRAWING NUMBER: C-11
DIHR BY: HFW	DISCIPLINE: CIVIL	SHEET NUMBER: 11 of 12
WWA NUMBER: 219044.00	FILE NAME: 904400C_DET-2.dwg	SCALE: H: N/A V: N/A
	DATE: 7/9/2021	

M:\219044 TcCulpeper WTP Upgrade\219044.00 Filter Trough Replacement\904400C_ISO.dwg



NO.	SHEET REVISION	BY	DATE	NO.	SHEET REVISION	BY	DATE



BID SET



DESIGNED BY: HFW	PROJECT: WATER TREATMENT PLANT IMPROVEMENTS TOWN OF CULPEPER, VIRGINIA			SET REV. NO. -
DRAWN BY: DJC	TITLE: GREENLEAF FILTER TROUGH SYSTEM FILTER VACUUM PUMP ISOMETRIC			DRAWING NUMBER: C-12
DIHR BY: HFW	WWA NUMBER: 219044.00	FILE NAME: 904400C_ISO.dwg	DISCIPLINE: CIVIL	SHEET NUMBER: 12 of 12
			SCALE: H: N/A V: N/A	DATE: 7/9/2021