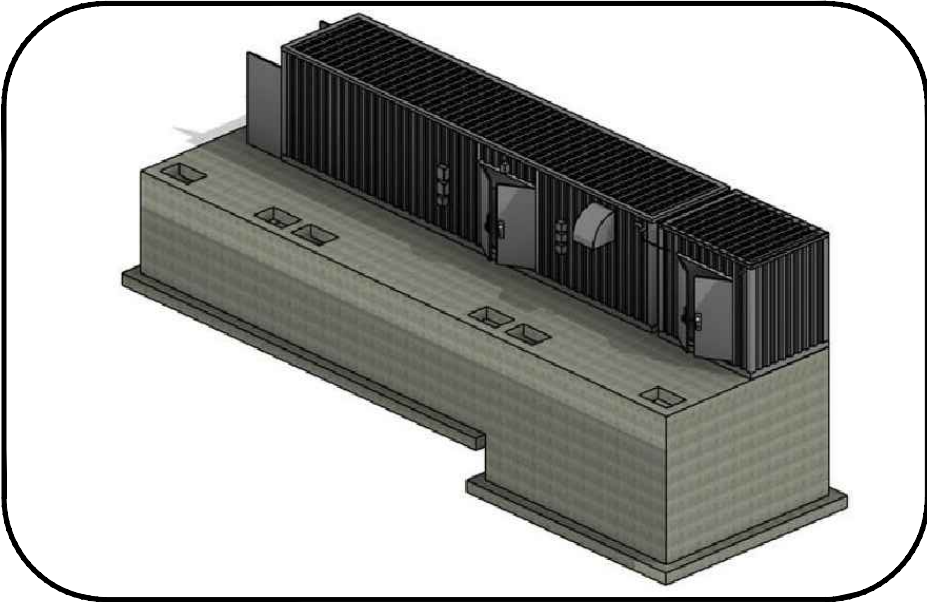


COMMUNITY OF PHIPPSBURG  
WASTEWATER TREATMENT IMPROVEMENT PROJECT  
FINAL DESIGN  
OCTOBER 2023



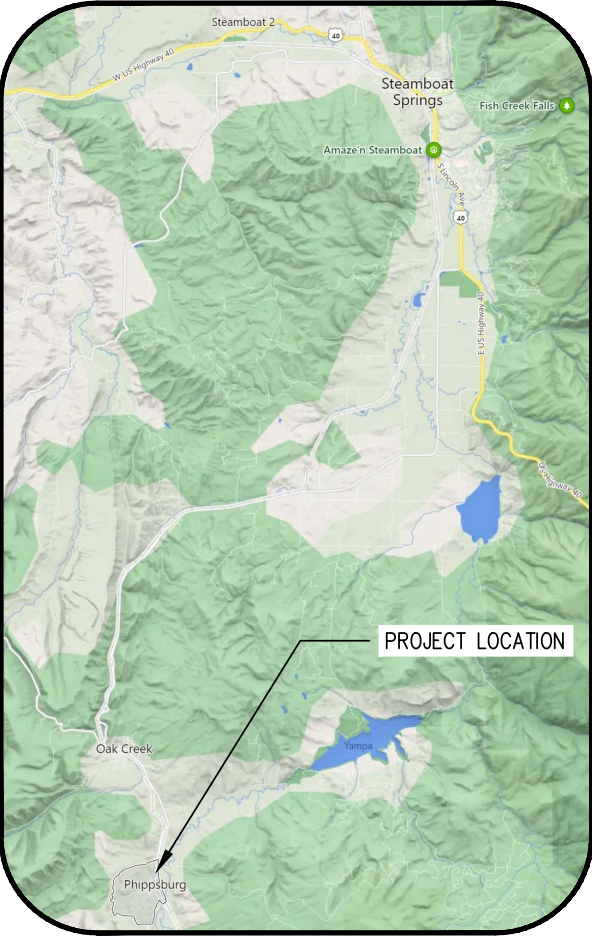
PROJECT ISOMETRIC  
NTS



SITE PLAN  
NTS



COMMUNITY OF PHIPPSBURG  
ON BEHALF OF  
ROUTT COUNTY ENVIRONMENTAL HEALTH



LOCATION MAP  
NOT TO SCALE




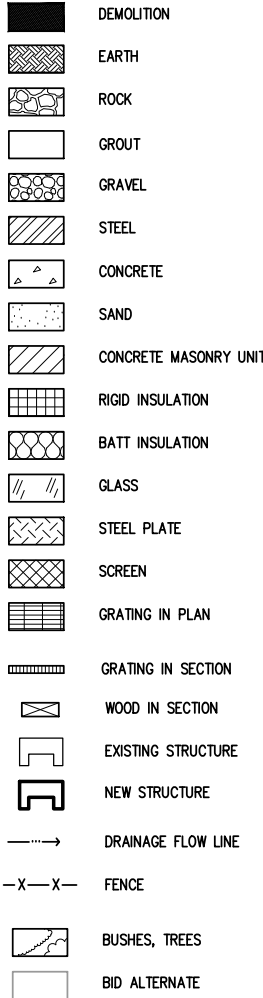
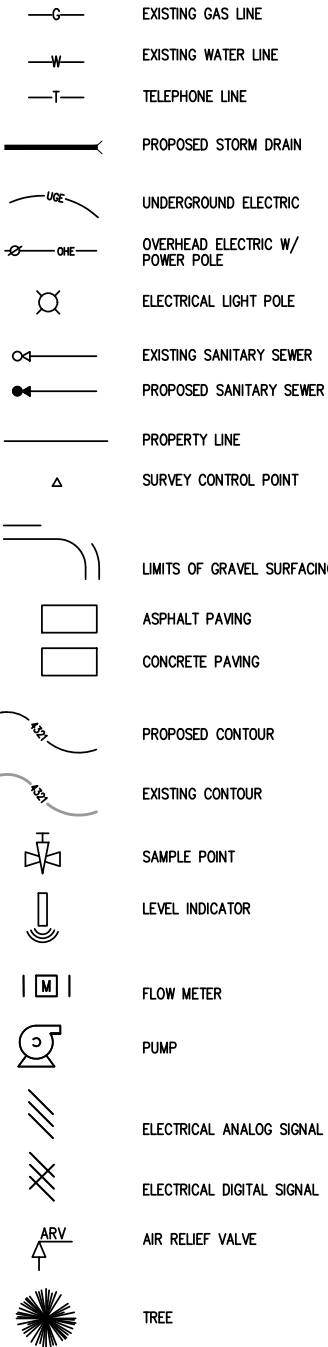
VICINITY MAP  
NOT TO SCALE



SHEET INDEX	
SHEET NUMBER	SHEET TITLE
GENERAL	
G1	COVER & SHEET LIST
G2	ABBREVIATIONS & SYMBOLS
G3	GENERAL NOTES & REQUIREMENTS
G4	DESIGN CRITERIA & MAJOR EQUIPMENT SUMMARY
G5	HYDRAULIC PROFILE
G6	PROCESS FLOW DIAGRAM
G7	PROCESS DETAILS
G8	METALS DETAILS
CIVIL	
C1	OVERALL SITE PLAN
C2	WWTP SITE PLAN
C3	SITE DEMOLITION & SEQUENCING PLAN
C4	WWTP GRADING PLAN
C5	LAGOON GRADING PLAN
C6	LAGOON RESTORATION PLAN
C7	EROSION CONTROL PLAN
C8	PRE-DEVELOPMENT DRAINAGE MAP
C9	POST DEVELOPMENT DRAINAGE MAP
C10	PROPOSED SEWER LINE PLAN & PROFILE
C11	PROPOSED SEWER LINE PLAN & PROFILE
C12	EFFLUENT DISCHARGE LINE CONNECTION DETAIL
C13	LAGOON CLOSURE PLAN
C14	EROSION CONTROL DETAILS
C15	CIVIL DETAILS
C16	CIVIL DETAILS II
C17	CIVIL DETAILS III

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
PROCESS	
P1	BUILDING ISOMETRICS & INSTALLATION NOTES
P2	CONCRETE TANK LID PLAN
P3	CONCRETE TANK EQUIPMENT
P4	PROCESS PLAN
P5	PROCESS SECTION A
P6	PROCESS SECTION B
P7	PROCESS SECTION C
P8	PROCESS SECTIONS D
P9	PROCESS SECTION E & F
P10	P&ID LEGEND
P11	P&ID 1
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STRUCTURAL	
S1	GENERAL STRUCTURAL NOTES
S2	STRUCTURAL OBSERVATION REQUIREMENT & ABBREVIATIONS
S3	CONCRETE TANK FOUNDATION PLAN
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S7	STRUCTURAL DETAILS
ELECTRICAL	
E1	ELECTRICAL NOTES & DETAILS
E2	ELECTRICAL LAYOUT
E3	ELECTRICAL ONE LINE & DETAILS



1		2		3		4		5		6		7		8		9		10										
A	AB	ANCHOR BOLT	F/F	FACE TO FACE	MG	MILLION GALLONS OR MILLIGRAMS	SA	SUPPLY AIR	WTR	WATER																		
	ABC	AGGREGATE BASE COURSE	FCA	FLANGE COUPLING ADAPTER	MGD	MILLION GALLONS PER DAY	SAN	SANITARY	WTRPRF	WATERPROOF(ING)																		
	AC	AIR CONDITIONING	FDN	FLOOR DRAIN	MH	MANHOLE	SB	SPLASH BLOCK	X-SECT	CROSS SECTION																		
	ACOUS	ACOUSTICAL	FED	FEDERAL	MIN	MINIMUM	SCFM	STANDARD CUBIC FEET PER MINUTE	YCO	YARD CLEANOUT																		
	ACP	ASPHALTIC CONCRETE	FES	FLARED END SECTION	MISC	MISCELLANEOUS	SCH	SCHEDULE	YD	YARD DRAIN																		
	ACTR	ACTUATOR	FIN	FINISH FLOOR ELEVATION	MJ	MECHANICAL JOINTS	SCRN	SCREEN	YH	YARD HYDRANT																		
	B	AD	AREA DRAIN OR ACCESS DOOR	FT	FINISH	MO	MASONRY OPENING	SD	STORM DRAIN																			
		ADDM	ADDENDUM	FLR	FLOOR	MRGYB	MOISTURE RESISTANT GYPSUM WALL BOARD	SDR	SECTION DIMENSION RATIO																			
		ADJ	ADJUSTABLE	FL	FLANGE	MTG	MOUNTING	SECT	SECTION																			
		AFF	ABOVE FINISHED FLOOR	FL	FLOW LINE			SHLDR	SHOULDER																			
AFG		ABOVE FINISHED GRADE	FLR	FLOOR	N	NITROGEN	SHT	SHEETING																				
AHU		AIR HANDLING UNIT	FN	FENCE	NA	NOT APPLICABLE	SHTHG	SHEATHING																				
AL		ALUMINUM	FOC	FACE OF CONCRETE	NAOCL	SODIUM HYPOCHLORITE	SIM	SIMILAR																				
ALT		ALTERNATE	FFM	FEET PER MINUTE	NF	NEAR FACE	SLV	SLEEVE																				
AMT		AMOUNT	FPS	FEET PER SECOND	NIC	NOT IN CONTRACT	SM	SMOOTH																				
APPROX		APPROXIMATE	FPW	FIRE PROTECTION WATER SUPPLY	NP	NO PAINT	SP	SPECIFICATION																				
C	ARV	AIR RELIEF VALVE	FR	FRAME	NPL	NAME PLATE	SPEC	SQUARE																				
	ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	FRP	FIBERGLASS REINFORCED PLASTIC	NPT	NATIONAL PIPE THREAD	SQ	SQUARE FEET																				
	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	FT	FASTENER	NPW	NON-POTABLE WATER	SQ FT	SQUARE FEET																				
	ASPH	ASPHALT	FTNTR	FASTENER	NRS	NON-RISING STEM	SQ IN	SQUARE INCH																				
	ASSY	ASSEMBLY	FTG	FOOTING OR FITTING	NTS	NOT TO SCALE	SQ YD	SQUARE YARD																				
	ATS	AUTOMATIC TRANSFER SWITCH	FUR	FURNACE			SST	STAINLESS STEEL																				
	AVG	AVERAGE					SST BT	STAINLESS STEEL BOLT																				
	AVS	AUTOMATIC VALVE STATION					ST	STREET																				
							STA	STATION																				
							STD	STANDARD																				
D	B	BLOWER	G	GAS	OC	ON CENTER	SV	SOLENOID VALVE																				
	B&F	BELL & FLANGE	GA	GAUGE	OD	OUTSIDE DIAMETER	SVC	SERVICE																				
	BB	BOND BEAM	GAL	GALLON	OF	OVER FLOW	SW	SIDEWALK																				
	BAF	BAFFLE	GALV	GALVANIZED	OPNG	OPENING	SWMP	STORM WATER MANAGEMENT PLAN																				
	BC	BACK OF CURB	GIP	GALVANIZED IRON PIPE	OPP	OPPOSITE	SYM	SYMMETRICAL																				
	BE	BELL END	GRND	GROUND	OPT	OPTIONAL	SYS	SYSTEM																				
	BF	BOTTOM FACE	GRD	GALLONS PER DAY			T	TEE																				
	BFV	BUTTERFLY VALVE	GPM	GALLONS PER MINUTE			T&B	TOP AND BOTTOM																				
	BLDG	BUILDING	GR BM	GRADE BEAM			T&G	TONGUE AND GROOVE																				
	BLK	BLOCK	GRC	GALVANIZED RIGID CONDUIT			T&P	TEMPERATURE AND PRESSURE																				
E	BM	BENCHMARK	GRTG	GRATING			TB	TOP OF BEAM																				
	BMPS	BEST MANAGEMENT PRACTICES	GSP	GALVANIZED STEEL PIPE			TBM	TEMPORARY BENCH MARK																				
	BOD	BIOCHEMICAL OXYGEN DEMAND	GV	GATE VALVE			TE	TOP ELEVATION																				
	BOT	BOTTOM OR BOTTOM OF TANK	GW	GYPSTUM WALL BOARD			TEMP	TEMPORARY																				
	BP	BOOSTER PUMP	H	HIGH			TFA	TO FLOOR ABOVE																				
	BS	BACKSIGHT	HB	HOSE BIB			TFB	TO FLOOR BELOW																				
	BSMT	BASEMENT	HDWL	HEAD WALL			TFF	TOP OF FINISH FLOOR																				
	BU	BELL UP	HNDRL	HAND RAIL			THD	THREAD(ED)																				
	BV	BALL VALVE	HNDWL	HANDWHEEL			THK	THICK																				
	BCV	BUTTERFLY CHECK VALVE	HORIZ	HORIZONTAL			TJ	TOP OF JOIST																				
F	BWL	BOTTOM WATER LEVEL	HP	HORSEPOWER			TOB	TOP OF BANK																				
			HPT	HYDROPNEUMATIC PRESSURE TANK			TOC	TOP OF CONCRETE																				
	C/C	CENTER TO CENTER	HR	HOSE			TOE	THREADED ONE END																				
	CB	CATCH BASIN	HS	HIGH STRENGTH			TOF	TOP OF FOOTING																				
	CCW	COUNTER CLOCKWISE	HVAC	HEATING, VENTILATION, AIR CONDITIONING			TOT	TOTAL																				
	CCOT	COLORADO DEPARTMENT OF TRANSPORTATION	HW	HOT WATER			TP	TOP OF PAVEMENT																				
	CEB	CONCRETE EQUIPMENT BASE	HWL	HIGH WATER LEVEL			TR	TOP OF RIM																				
	CIP	CAST IRON PIPE	HWY	HIGHWAY			TSL	TOP OF SLAB																				
	CIMJ	CAST IRON MECHANICAL JOINT	HYD	HYDRANT			TST	TOP OF STEEL																				
	CISP	CAST IRON SOIL PIPE					TW	TOP OF WALL																				

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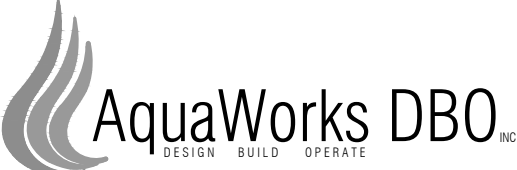
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COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
ABBREVIATIONS & SYMBOLS

PROJECT NUMBER:  
#2479

SCALE:  
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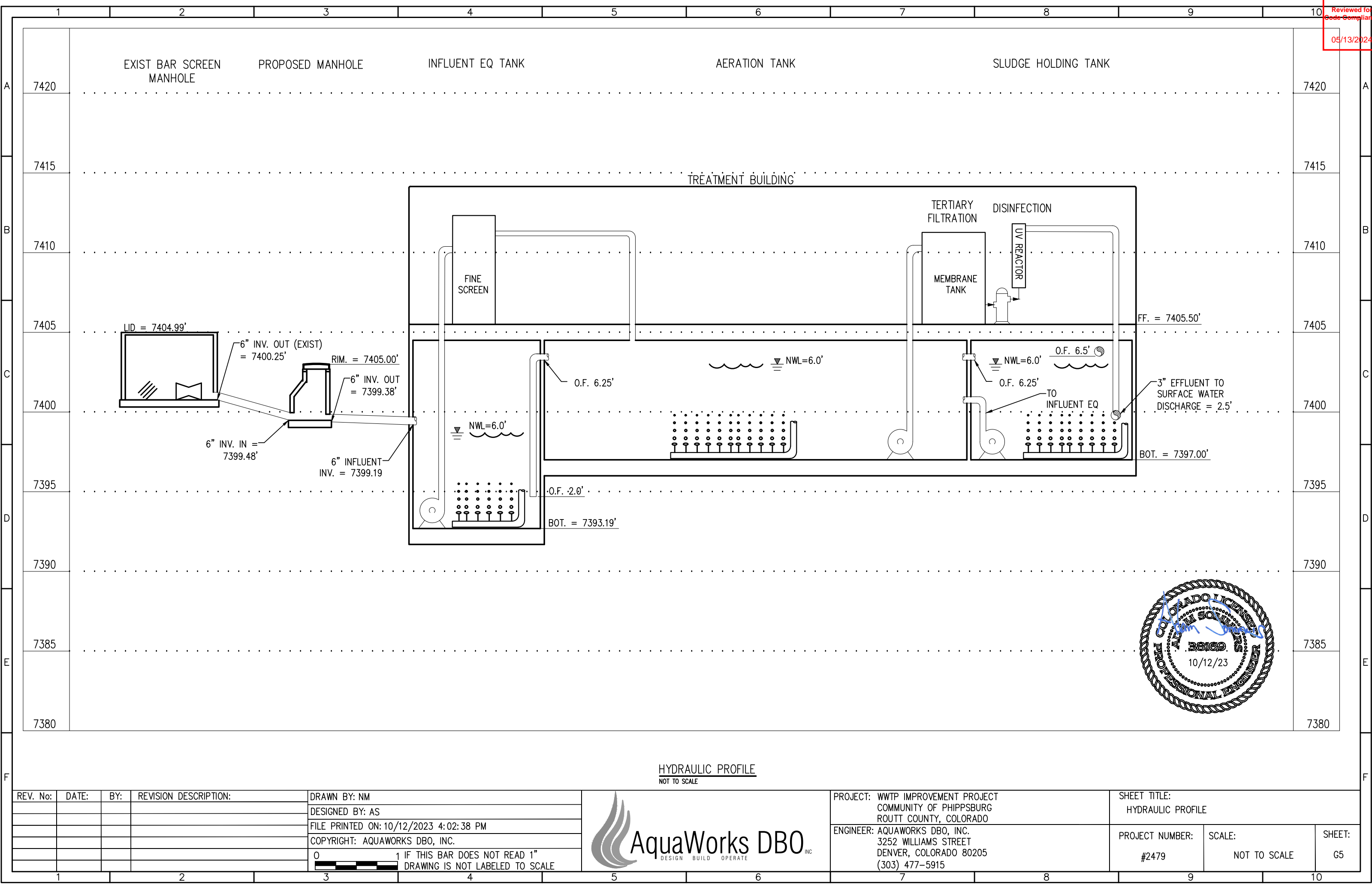
SHEET:  
G2





A
B
C
D
E
F

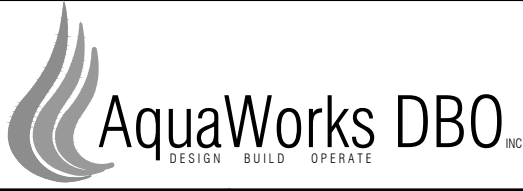




Reviewed for  
Code Compliance  
05/13/2024

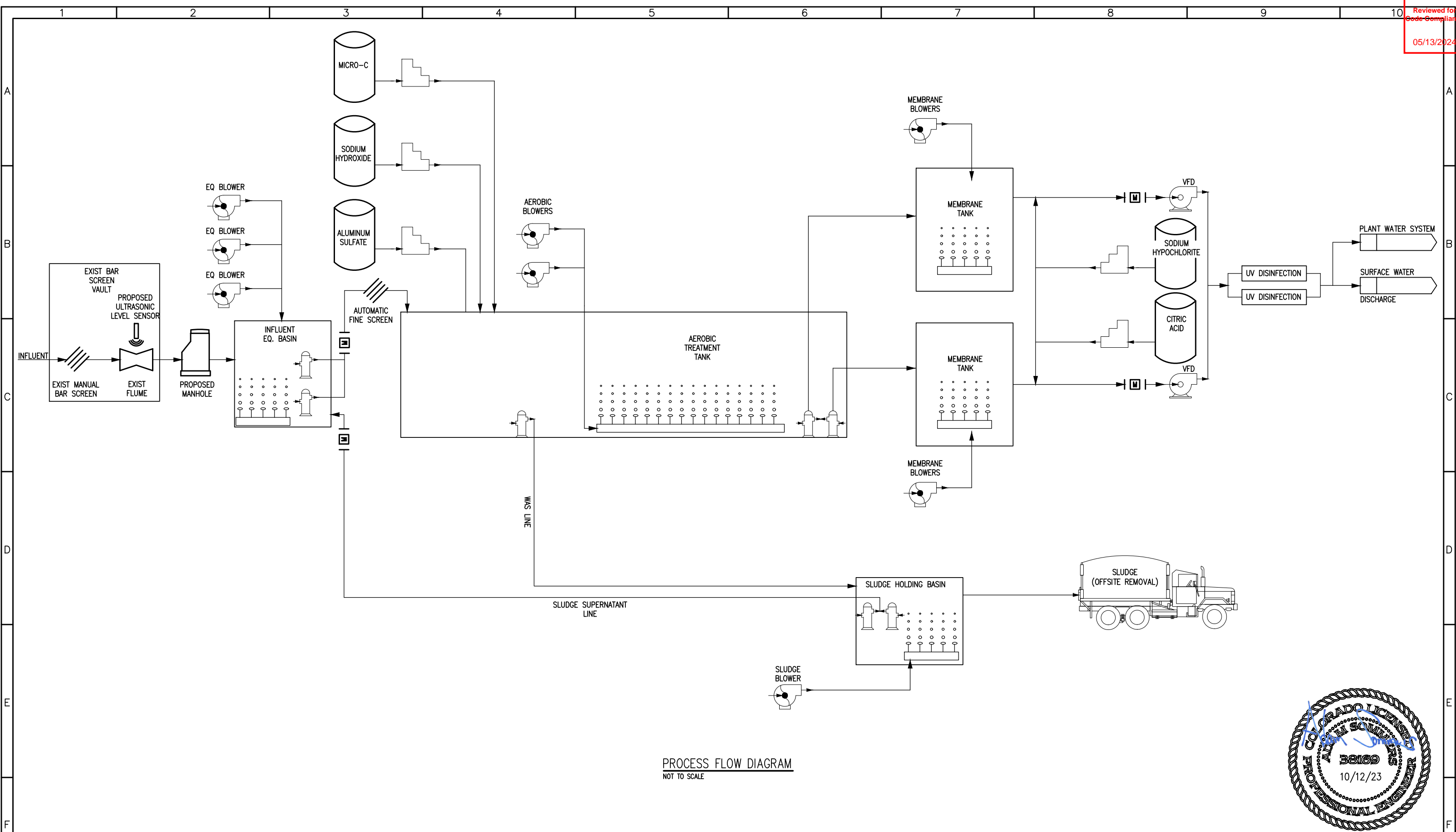
HYDRAULIC PROFILE  
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COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE: HYDRAULIC PROFILE		
PROJECT NUMBER: #2479	SCALE: NOT TO SCALE	SHEET: G5

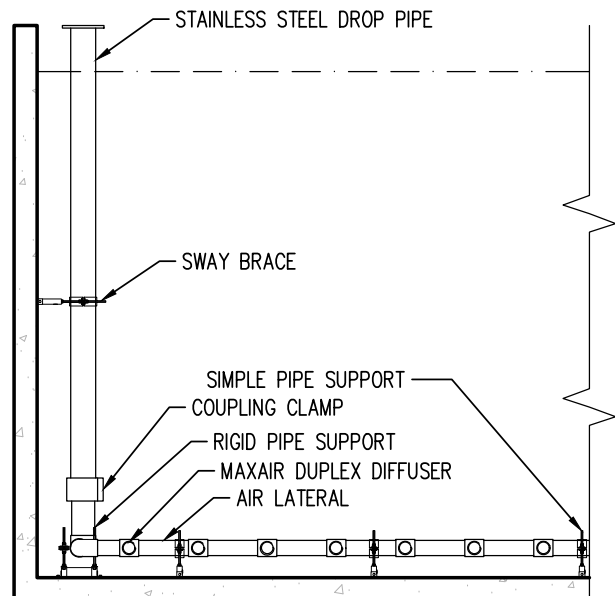


PROCESS FLOW DIAGRAM  
NOT TO SCALE



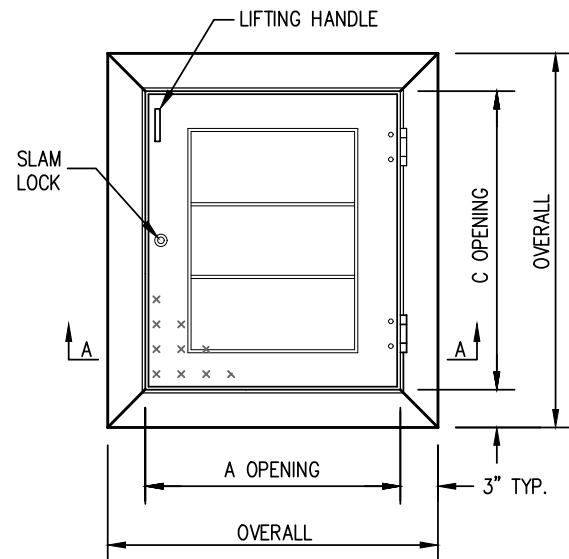
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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER:  #2479	SCALE:  NOT TO SCALE	SHEET:  G6
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1	2		3	4		5	6	7	8	9





DIFFUSER ASSEMBLY DETAIL  
NTS

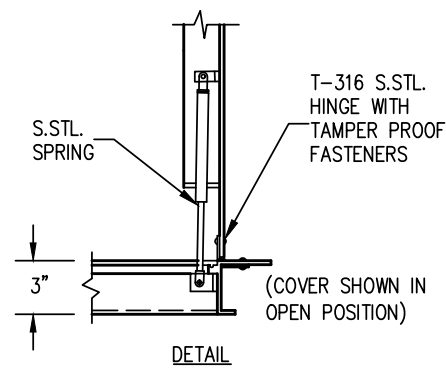
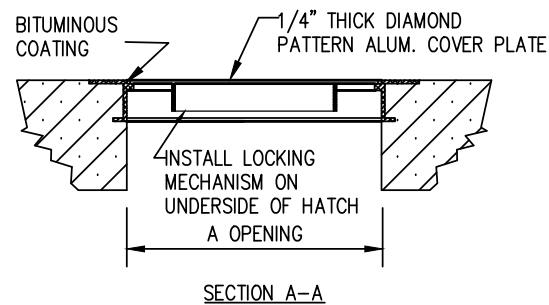
1  
G7



### SERIES S1S ACCESS DOOR

#### STANDARD FEATURES:

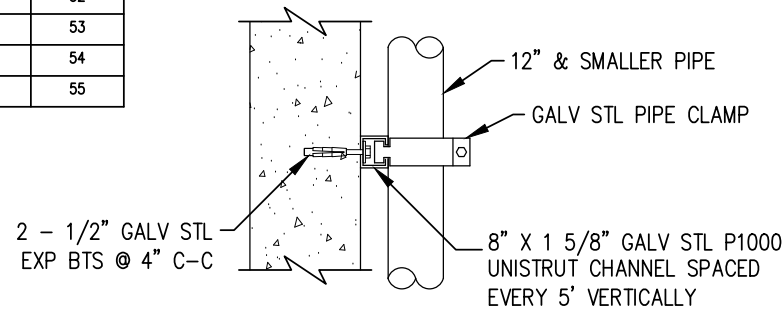
- 300 LBS. PER SQ. FT. LOAD RATING
- EXTRUDED ALUMINUM ANGLE FRAME
- SINGLE LEAF CONSTRUCTION
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- T-316 STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY
- STAINLESS STEEL COMPRESSION SPRING ASSIST
- BUILT-IN EPDM CUSHION/GASKET
- NON-OZONE DEPLETING BITUMINOUS COATING
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE



HATCH DETAIL  
NTS

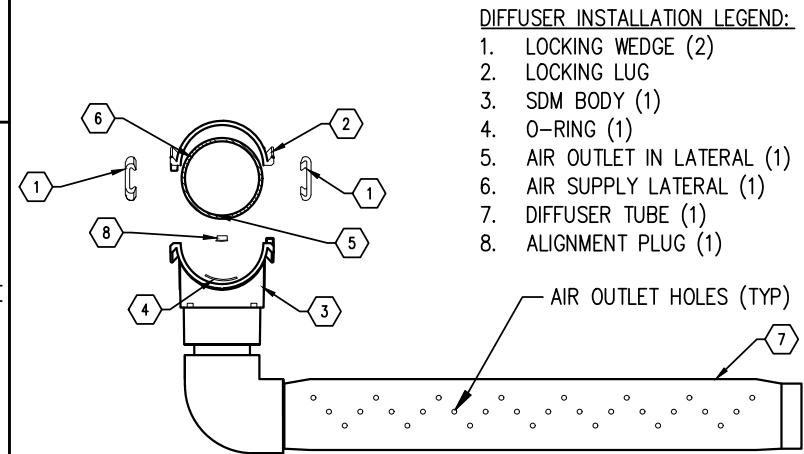
2  
G7

STANDARD SIZES				
QTY.	MODEL NO.	A DIM. INCHES	C DIM. INCHES	UNIT WT. LBS.
	SIS2424	24	24	37
	SIS2430	24	30	38
6	SIS2436	24	36	39
	SIS2442	24	42	40
	SIS2448	24	48	41
	SIS3030	30	30	42
	SIS3036	30	36	43
	SIS3042	30	42	44
	SIS3048	30	48	45
	SIS3054	30	54	46
	SIS3060	30	60	47
	SIS3636	36	36	48
	SIS3642	36	42	49
	SIS3648	36	48	50
	SIS3654	36	54	51
	SIS3660	36	60	52
	SIS3666	36	66	53
	SIS3672	36	72	54
	SIS4242	42	42	55



TYPICAL PIPE SUPPORT DETAIL  
NTS

3  
G7

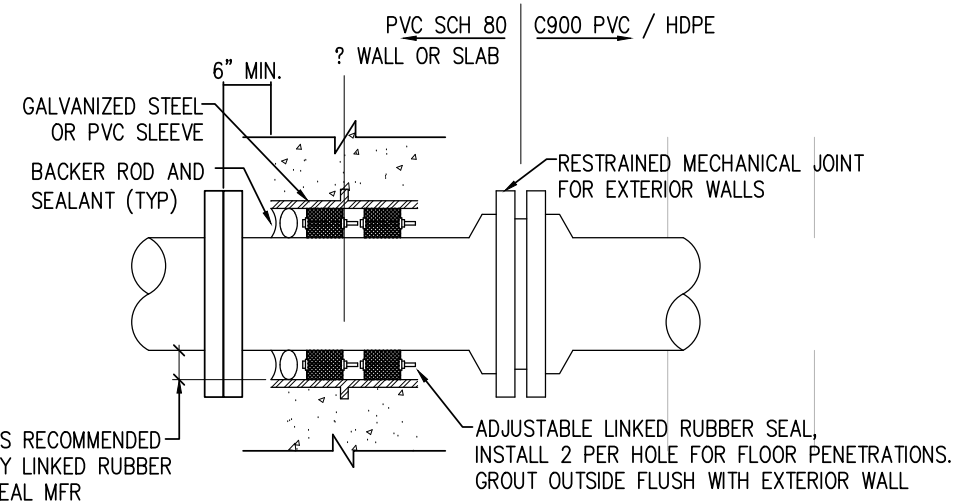


#### DIFFUSER INSTALLATION LEGEND:

1. LOCKING WEDGE (2)
2. LOCKING LUG
3. SDM BODY (1)
4. O-RING (1)
5. AIR OUTLET IN LATERAL (1)
6. AIR SUPPLY LATERAL (1)
7. DIFFUSER TUBE (1)
8. ALIGNMENT PLUG (1)

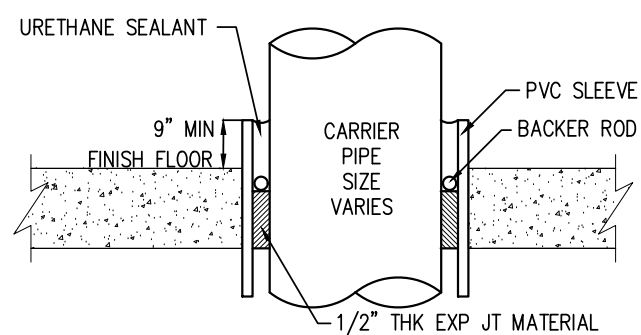
DIFFUSER INSTALLATION DETAIL  
NTS

4  
G7



WALL PENETRATION DETAIL  
NTS

5  
G7

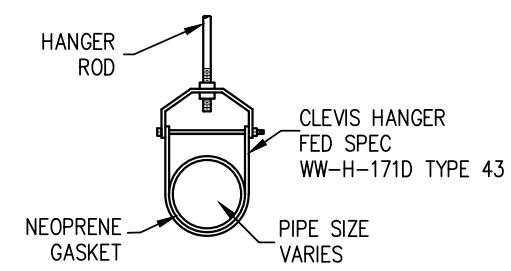


#### NOTE:

1. FOR FOUNDATION WALL PENETRATION PROVIDE 1" ANNULAR SPACE AROUND CARRIER PIPE AND SEAL WITH URETHANE SEALANT ONLY TO PERMIT MOVEMENT

FLOOR PENETRATION DETAIL  
NTS

6  
G7

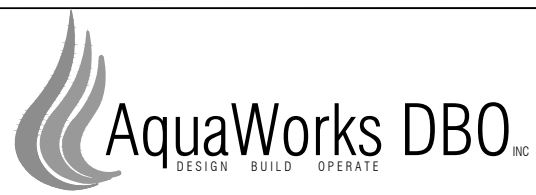


PIPE SIZE	HANGER ROD DIA
2" & SMALLER	3/8"
2 1/2"	1/2"
3" & 4"	5/8"
6" THRU 12"	3/4"

PIPE HANGER SUPPORT DETAIL  
NTS

7  
G7

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COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE: PROCESS DETAILS		
PROJECT NUMBER: #2479	SCALE: NTS	SHEET: G7

SERIES DB PORTABLE HOIST

- STANDARD FEATURES:
- TYPE-304 STAINLESS STEEL CONSTRUCTION
  - 30 FEET (9 METERS) OF 1/4" (7 MM) STAINLESS STEEL CABLE
  - GALVANIZED 1 TON HOOK
  - DUTTON-LAINSON MARINE GRADE BRAKE WINCH
  - ADJUSTABLE REACH IN 1" (25 MM) INCREMENTS
  - 3 YEAR GUARANTEE

- OPTIONS:
- TYPE-316 CONSTRUCTION
  - ADDITIONAL CABLE AVAILABLE (SPECIFY LENGTH)
  - STAINLESS STEEL WINCH
  - STAINLESS STEEL HOOK
  - OTHER REACHES AVAILABLE UPON REQUEST (CONSULT FACTORY)

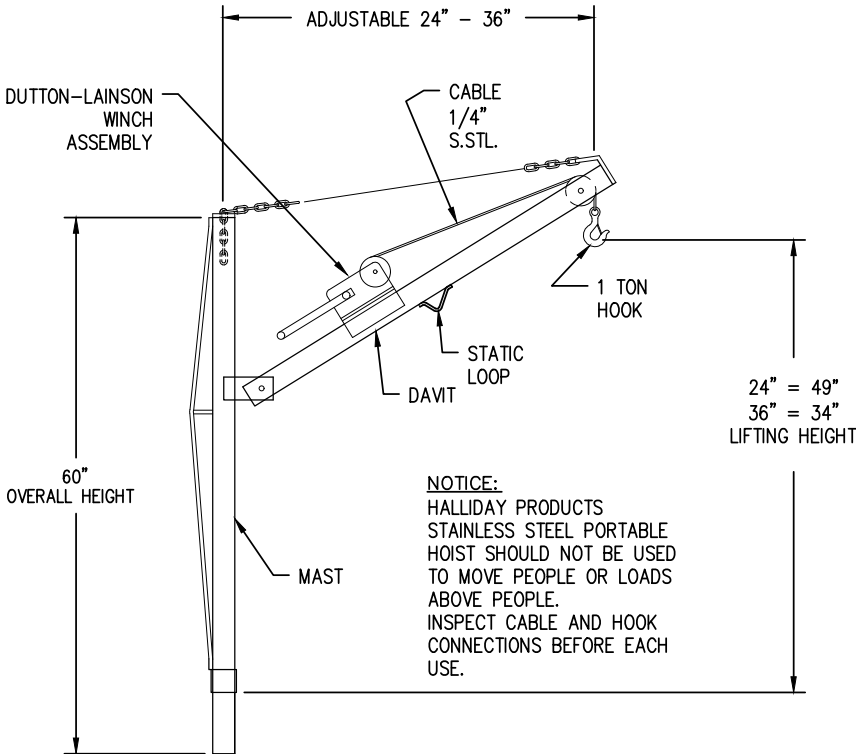


STANDARD SIZES:			
QTY.	MODEL NO.	MAX .LOAD LBS. (KG.)	UNIT WT. LBS. (KG.)
	D1B36C	300 (136)	73 (33)



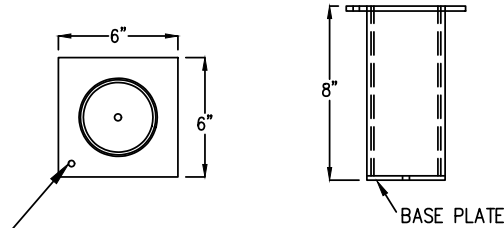
HOIST BASE LOCATIONS:

- 1) INFLUENT EQ PUMPS
- 2) SLUDGE TANK PUMPS
- 3) MBR FEED FORWARD PUMPS



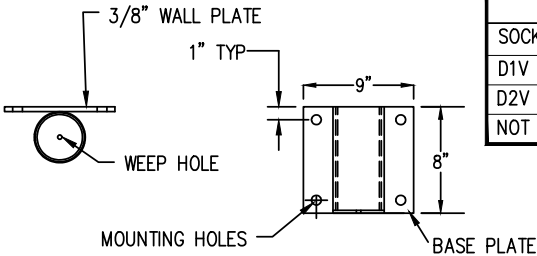
NOTICE:  
HALLIDAY PRODUCTS  
STAINLESS STEEL PORTABLE  
HOIST SHOULD NOT BE USED  
TO MOVE PEOPLE OR LOADS  
ABOVE PEOPLE.  
INSPECT CABLE AND HOOK  
CONNECTIONS BEFORE EACH  
USE.

PORTABLE HOIST 1  
NTS G8



EMBED STYLE HOIST SOCKETS	
SOCKET MODEL #	FOR HOIST MODELS
D1S LINED	D1A AND D1B
D2S LINED	D2A AND D2B
D3S LINED	D3A AND D3B

EMBED STYLE HOIST SOCKETS



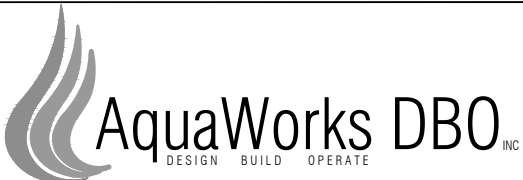
WALL STYLE HOIST SOCKETS	
SOCKET MODEL #	FOR HOIST MODELS
D1V LINED	D1A AND D1B
D2V LINED	D2A AND D2B
NOT AVAILABLE	D3A AND D3B

LIFT STATION HOIST SOCKET

HOIST BASE 2  
NTS G8




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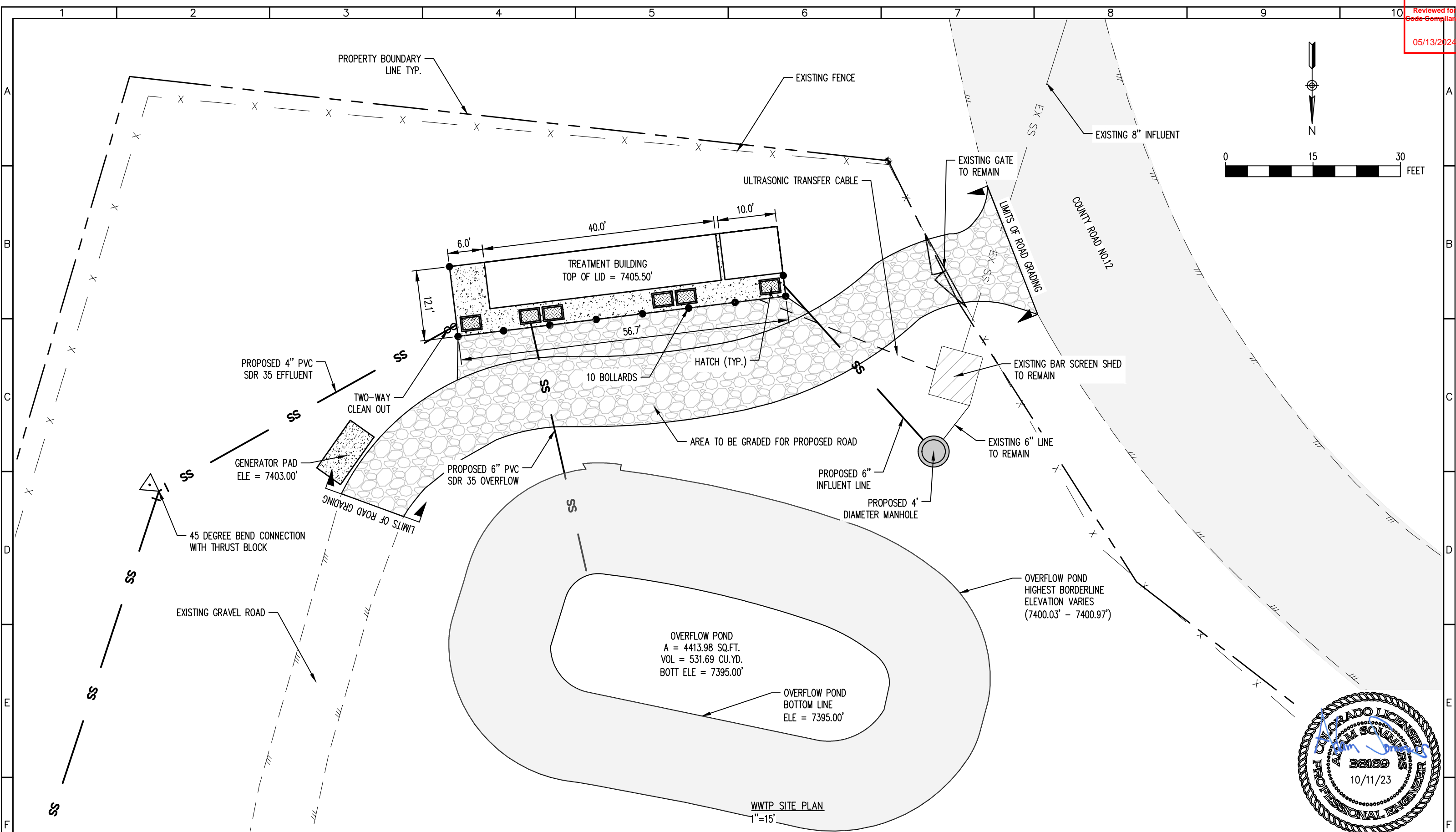
PROJECT: WWTP IMPROVEMENT PROJECT COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO			SHEET TITLE: METALS DETAILS		
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: NTS	SHEET: G8

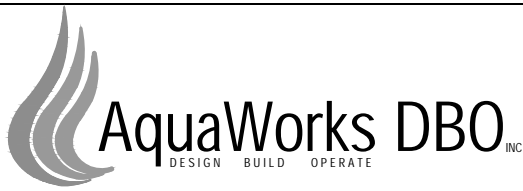




REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: MG		PROJECT: PHIPPSBURG COLORADO WWTP COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	SHEET TITLE: OVERALL SITE PLAN		
				DESIGNED BY: AS					
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							PROJECT NUMBER: 7830	SCALE: 1"=40'	SHEET: C1





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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: 7830	SCALE: 1"=15'	SHEET: C2
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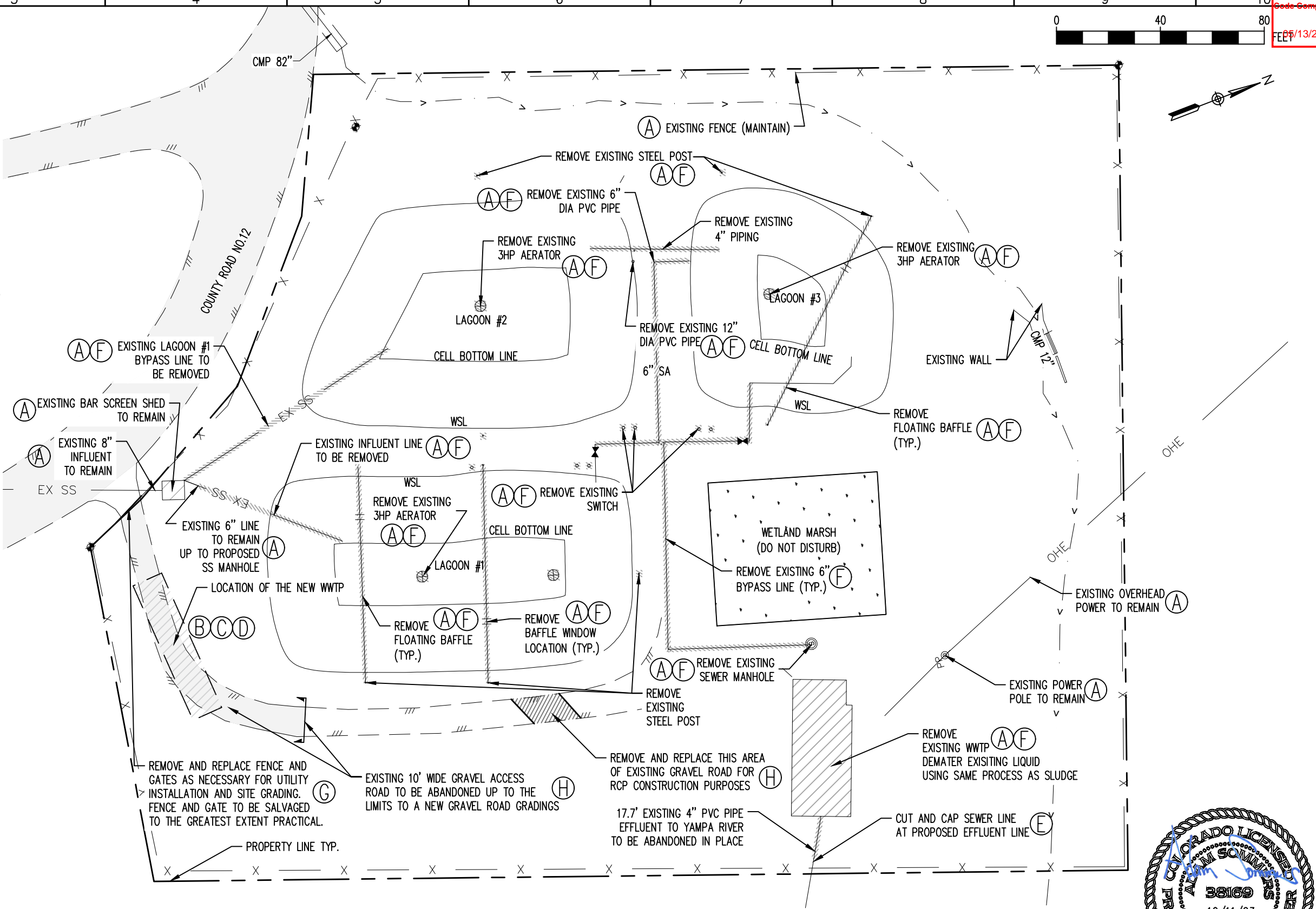


DEMOLITION NOTES:


1. SITE DEMOLITION TO BE COORDINATED WITH ENGINEER AND OWNER WITH RESPECT TO EQUIPMENT OR FACILITIES TO REMAIN IN SERVICE, TO BE REMOVED, OR TO BE ABANDONED IN PLACE.
2. THE CONTRACTOR IS NOT TO DAMAGE CURBS, WALKS OR PAVING WHICH IS NOT INCLUDED IN THE SITE PREPARATION OR DEMOLITION SHOWN ON THE PLANS. THE COST TO REPAIR ANY SUCH DAMAGE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. REMOVE AND DISPOSE OF ALL PAVING MATERIALS PROPERLY, INCLUDING BASE COURSE AND ANY OTHER DEBRIS ENCOUNTERED.
4. CONCRETE OR ASPHALT SAWCUTS SHALL BE CRISP CLEAN CUTS THAT ARE NEAT IN APPEARANCE. LOCATE ALL SAWCUTS AS REQUIRED PER DIRECTION OF THE ENGINEER.
5. ALL EXISTING SITE TREES AND VEGETATION ARE TO BE PROTECTED IN PLACE, UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS.
6. SITE REVEGETATION SHALL COMPLY WITH THE MUNICIPAL/COUNTY STANDARDS AND THE PROJECT REVEGETATION SPECIFICATION, AND LANDSCAPE PLAN, AS APPLICABLE.
7. THE CONTRACTOR SHALL REPLACE TO ORIGINAL CONDITION OR BETTER AT HIS EXPENSE ALL VEGETATION THAT IS DAMAGED BY CONSTRUCTION OPERATIONS.
8. THE CONTRACTOR IS TO ADHERE TO SPOT ELEVATIONS AND CONTOURS AS INDICATED ON THE GRADING PLAN. SPOT ELEVATIONS TAKE PRECEDENCE OVER CONTOURS WHERE CONFLICTING INFORMATION IS SHOWN.
9. ALL GRADES ARE TO BE APPROVED BY THE ENGINEER PRIOR TO PERMANENT PLANTING, SEEDING, AND FLAT WORK.
10. ALL AREAS SHALL BE GRADED TO ACHIEVE POSITIVE DRAINAGE, AS DEFINED IN THE SPECIFICATIONS.
11. EXCAVATIONS INCLUDES ALL MATERIAL ENCOUNTERED TO THE DEPTH INDICATED ON THE PLANS. EXCAVATE TO ALLOW FOR PROPER FILL MATERIAL, SLABS, VOIDS, FORMS, AND FOUNDATIONS, AND FOR THE REMOVAL OF UNSUITABLE MATERIALS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING GRADING AND EXCAVATION.
12. ALL BEDDING, BACKFILL SUBGRADE CONSTRUCTION, AND EMBANKMENT SHALL BE CONSTRUCTED ACCORDING TO THE SPECIFICATIONS AND GEOTECHNICAL REPORT.
13. REFER TO GRADING PLAN FOR ALL SITE ELEVATIONS AND GRADING REQUIREMENTS.
14. REFER TO CIVIL DETAIL SHEETS FOR SITE DETAILS.
15. CONTRACTOR AND OWNER TO COORDINATE WITH UTILITY PROVIDERS FOR RELOCATION OF EXISTING INFRASTRUCTURE.
16. CONTRACTOR TO REMOVE EXISTING TANK FOUNDATION. APPROXIMATE AREA 300 SF.

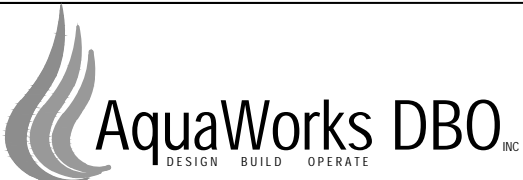
SEQUENCING NOTES (NOT INCLUSIVE OF ALL ACTIVITIES):

- A. EXISTING WWTP TO REMAIN IN OPERATION UNTIL NEW WWTP HAS COMPLETED CLEAN WATER TESTING AND IS READY TO RECEIVE INFLUENT WASTEWATER. MAINTAIN EXISTING 8" AND 6" INFLUENT LINE AND 4" DISCHARGE LINE DURING CONSTRUCTION.
- B. CONSTRUCT NEW WWTP. INSTALL SITE PIPING.
- C. CLEAN WATER TEST NEW WWTP IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- D. COMMENCE WASTEWATER TREATMENT AT NEW FACILITY.
- E. ABANDON IN PLACE EXISTING WASTEWATER LINES PLUG AND CAP.
- F. REMOVE EXISTING INFLUENT LINE AND BYPASS LINE, EXISTING STEEL POST, EXISTING SWITCH, EXISTING SEWER MANHOLE, EXISTING FLOATING BAFFLE AND 3HP AERATOR.
- G. REMOVE AND REPLACE EXISTING FENCING AS SHOWN.
- H. REMOVE EXISTING GRAVEL ACCESS.



SITE DEMOLITION & SEQUENCING PLAN  
1"=40'

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PROJECT: PHIPPSBURG COLORADO WWTP  
COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO

---

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
SITE DEMOLITION & SEQUENCING PLAN

PROJECT NUMBER:	SCALE:	SHEET:
7830	1"=40'	C3

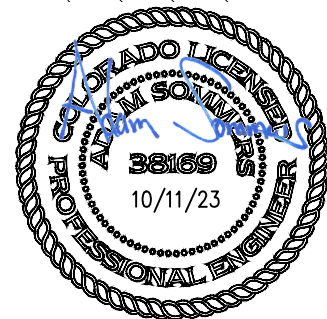
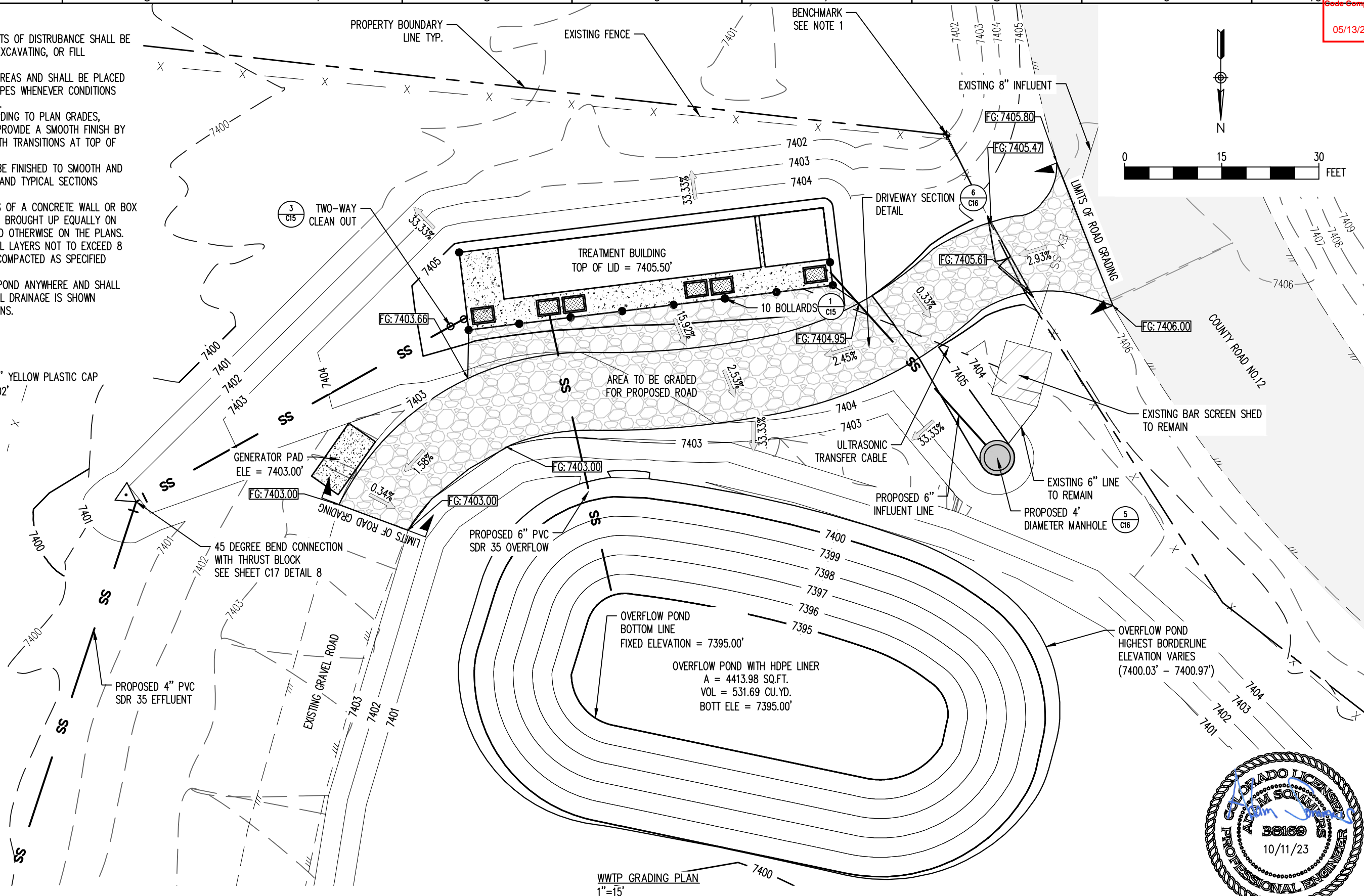


GRADING NOTES:

1. TOPSOIL WITHIN THE DESIGNATED PROJECT LIMITS OF DISTURBANCE SHALL BE SALVAGED PRIOR TO BEGINNING OF HAULING, EXCAVATING, OR FILL OPERATIONS.
2. TOPSOIL SHALL BE REPLACED TO DISTURBED AREAS AND SHALL BE PLACED DIRECTLY UPON COMPLETED CUT AND FILL SLOPES WHENEVER CONDITIONS AND THE PROGRESS OF CONSTRUCTION PERMIT.
3. CONTRACTOR TO INSTALL FINISH GRADE ACCORDING TO PLAN GRADES, SLOPES, SPOTS, NOTES AND SPECIFICATIONS. PROVIDE A SMOOTH FINISH BY RANKING IN TOPSOILED AREAS. PROVIDE SMOOTH TRANSITIONS AT TOP OF BANKS AND TOE OF SLOPES.
4. ALL EXCAVATIONS AND EMBANKMENTS SHALL BE FINISHED TO SMOOTH AND UNIFORM SURFACES CONFORMING WITH PLANS AND TYPICAL SECTIONS DETAILED AND SPECIFIED HERE.
5. WHEN EMBANKMENT IS PLACED ON BOTH SIDES OF A CONCRETE WALL OR BOX TYPE STRUCTURE, THE EMBANKMENT SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE STRUCTURE UNLESS NOTED OTHERWISE ON THE PLANS.
6. EMBANKMENT SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 8 INCHES LOOSE MEASUREMENT AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED.
7. SURFACE WATER SHALL NOT BE ALLOWED TO POND ANYWHERE AND SHALL DRAIN AWAY FROM BUILDING AT ALL TIMES. ALL DRAINAGE IS SHOWN DRAINING AWAY FROM BUILDING ON THESE PLANS.

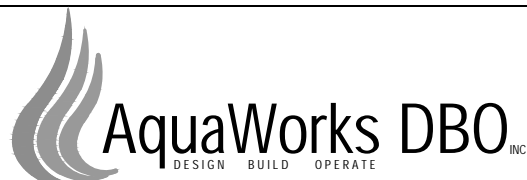
NOTES:

1. ONSITE BENCHMARK FOUND :#5 REBAR WITH 1" YELLOW PLASTIC CAP "DISMUKE AND DISMUKE LS 7736" ELEV:7401.02'



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PROJECT: PHIPPSBURG COLORADO WWTP  
COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:		
WWTP GRADING PLAN		
PROJECT NUMBER:	SCALE:	SHEET:
7830	1"=15'	C4



GRADING NOTES:

1. TOPSOIL WITHIN THE DESIGNATED PROJECT LIMITS OF DISTURBANCE SHALL BE SALVAGED PRIOR TO BEGINNING OF HAULING, EXCAVATING, OR FILL OPERATIONS.
2. TOPSOIL SHALL BE REPLACED TO DISTURBED AREAS AND SHALL BE PLACED DIRECTLY UPON COMPLETED CUT AND FILL SLOPES WHENEVER CONDITIONS AND THE PROGRESS OF CONSTRUCTION PERMIT.
3. CONTRACTOR TO INSTALL FINISH GRADE ACCORDING TO PLAN GRADES, SLOPES, SPOTS, NOTES AND SPECIFICATIONS. PROVIDE A SMOOTH FINISH BY RANKING IN TOPSOILED AREAS. PROVIDE SMOOTH TRANSITIONS AT TOP OF BANKS AND TOE OF SLOPES.
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5. WHEN EMBANKMENT IS PLACED ON BOTH SIDES OF A CONCRETE WALL OR BOX TYPE STRUCTURE, THE EMBANKMENT SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE STRUCTURE UNLESS NOTED OTHERWISE ON THE PLANS.
6. EMBANKMENT SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 8 INCHES LOOSE MEASUREMENT AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED.
7. SURFACE WATER SHALL NOT BE ALLOWED TO POND ANYWHERE AND SHALL DRAIN AWAY FROM BUILDING AT ALL TIMES. ALL DRAINAGE IS SHOWN DRAINING AWAY FROM BUILDING ON THESE PLANS.

NOTES:

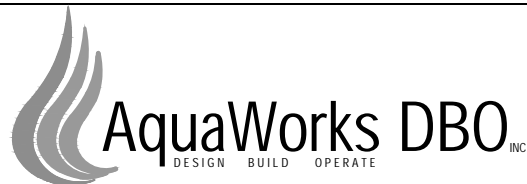
1. ONSITE BENCHMARK FOUND :#5 REBAR WITH 1" YELLOW PLASTIC CAP "DISMUKE AND DISMUKE LS 7736" ELEV:7401.02'

RESTORATION SEEDING SPECIFICATIONS:

REFER TO PROJECT SPECIFICATION MANUAL SECTION 32 92 00 FOR THE FOLLOWING ITEMS:

1. SOIL ANALYSIS
2. SEED AND MULCH SUBMITTALS
3. SITE PREPARATION AND PROTECTION
4. SOIL PREPARATION
5. SEEDING AND MULCHING
6. WARRANTY AND CONDITIONS

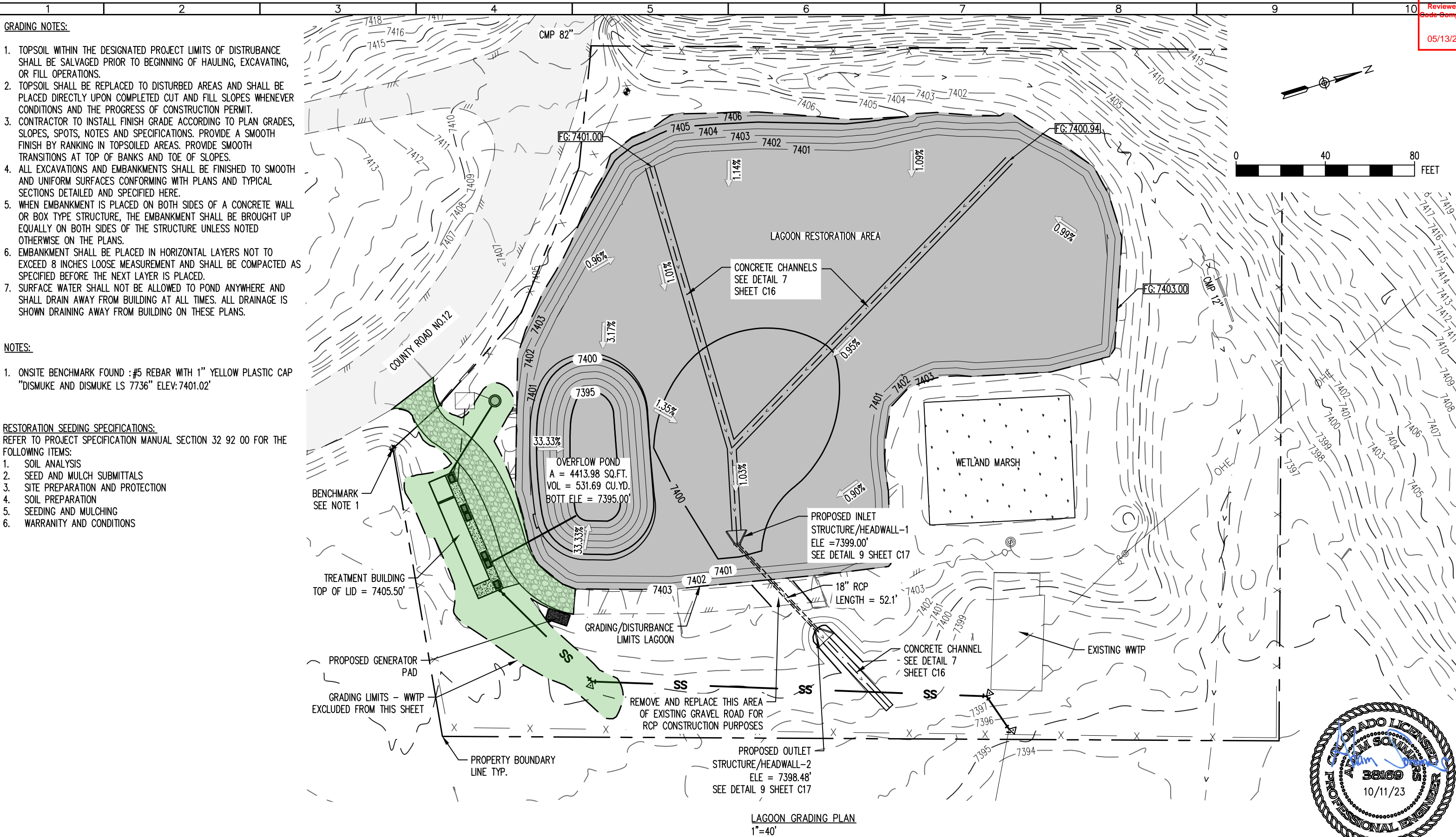
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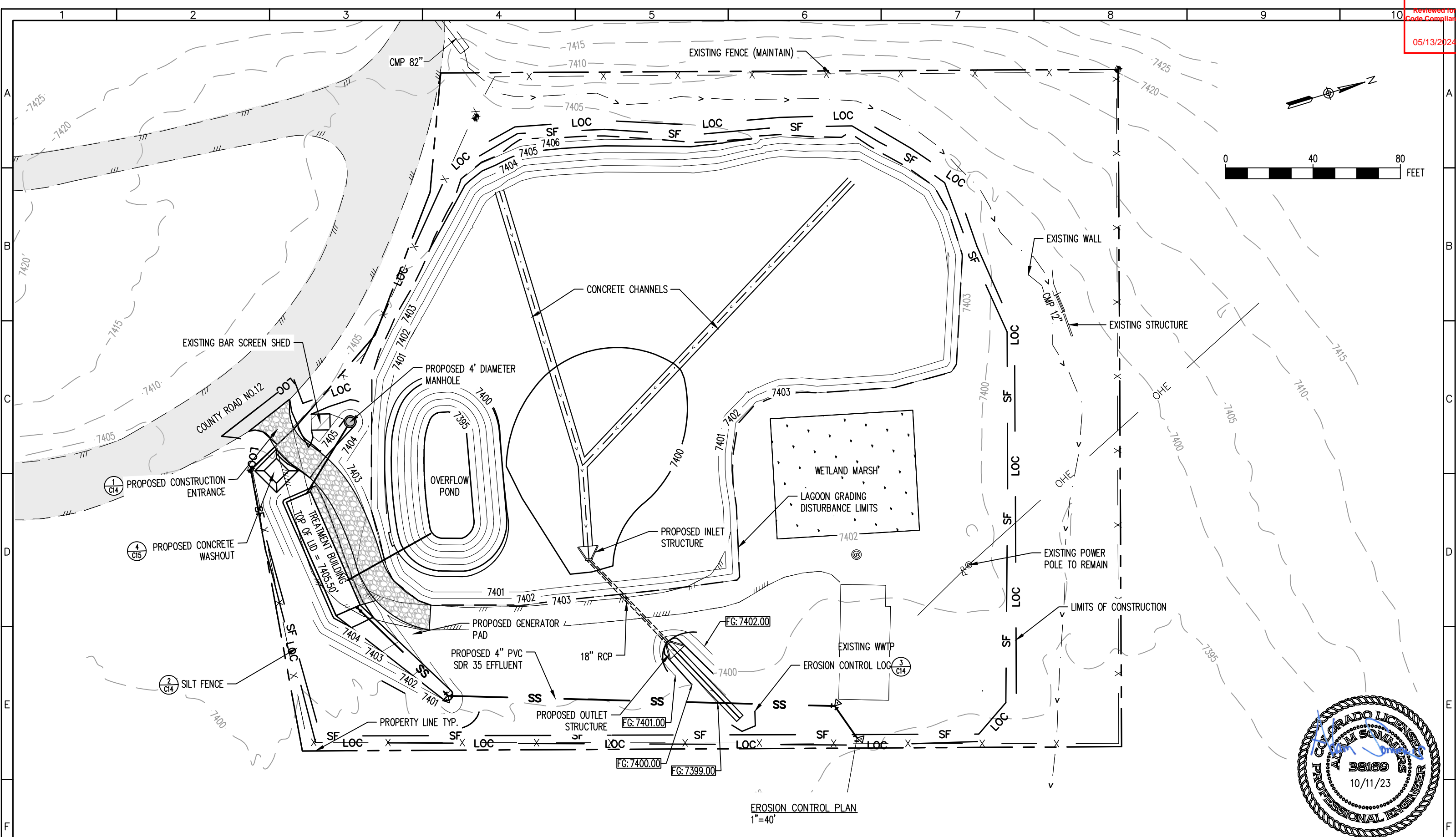


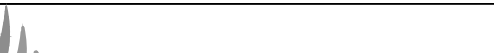

PROJECT: PHIPPSBURG COLORADO WWTP  
COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:  
LAGOON GRADING PLAN

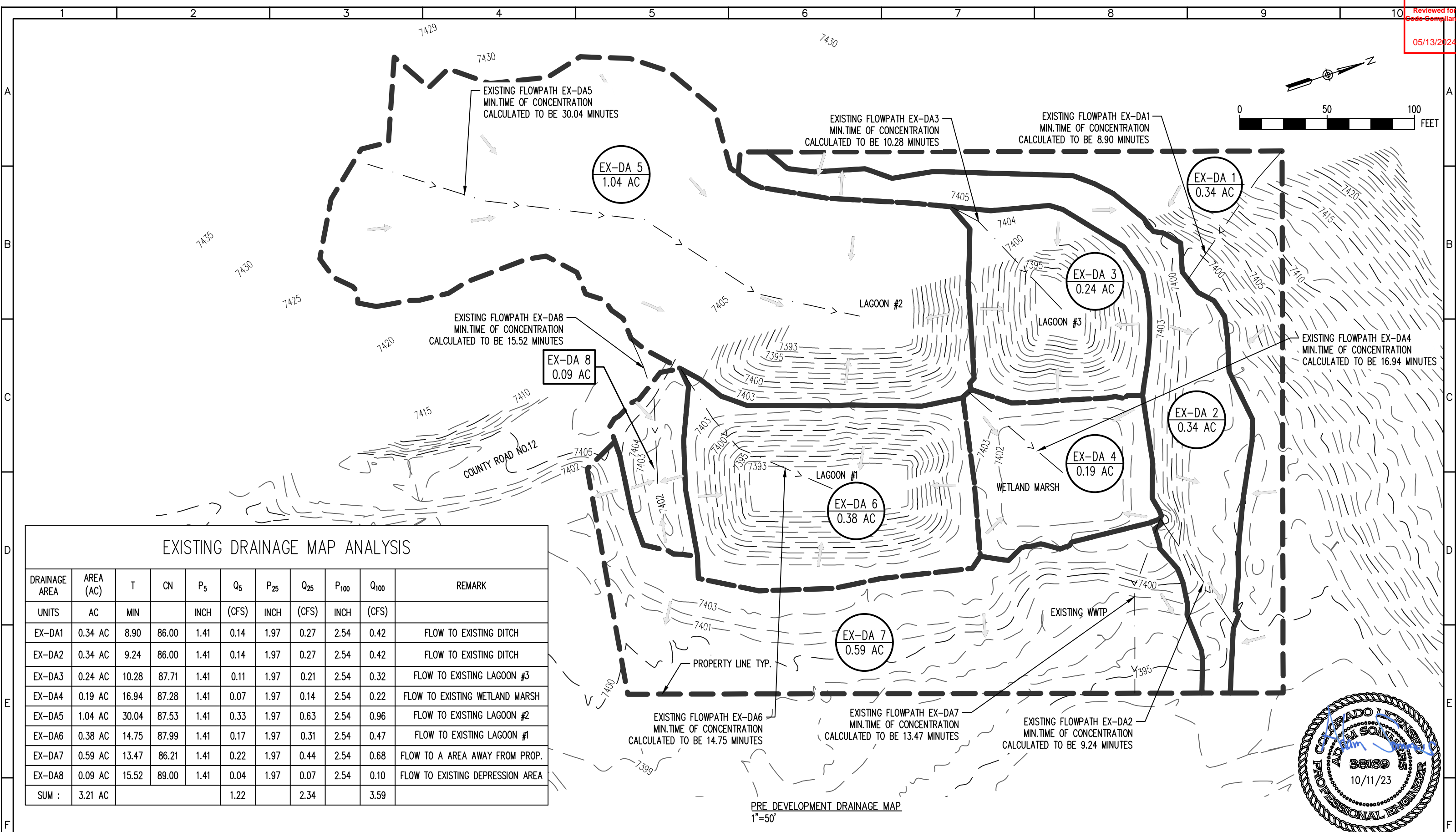
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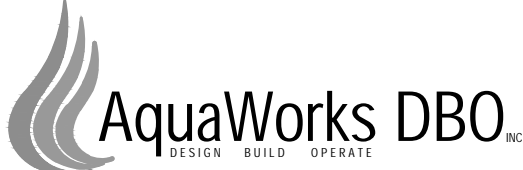


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				DESIGNED BY: AS			ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER:  7830	SCALE:  1"=40'	SHEET:  C6								
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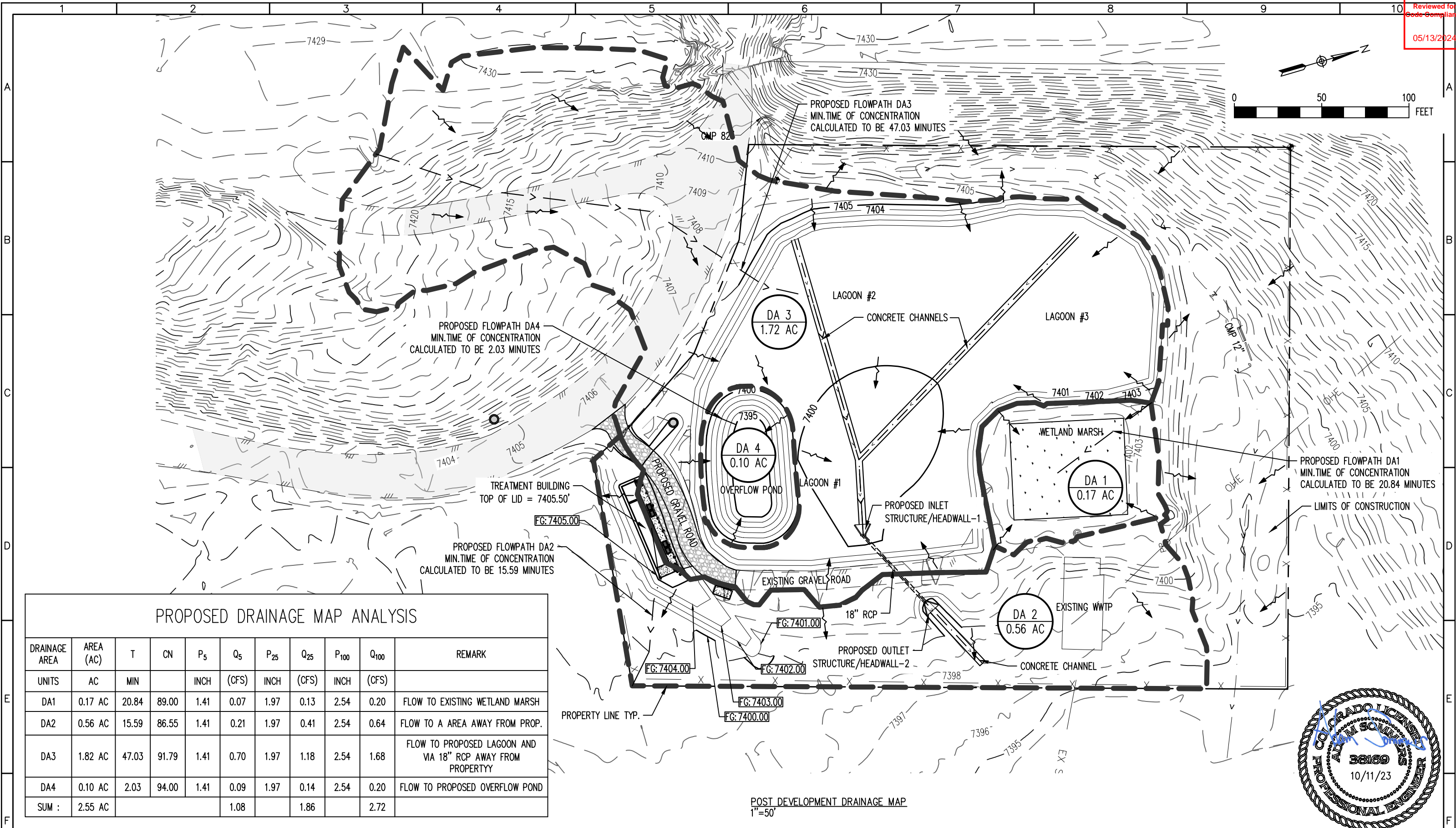


PROJECT: PHIPPSBURG COLORADO WWTP  
COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO

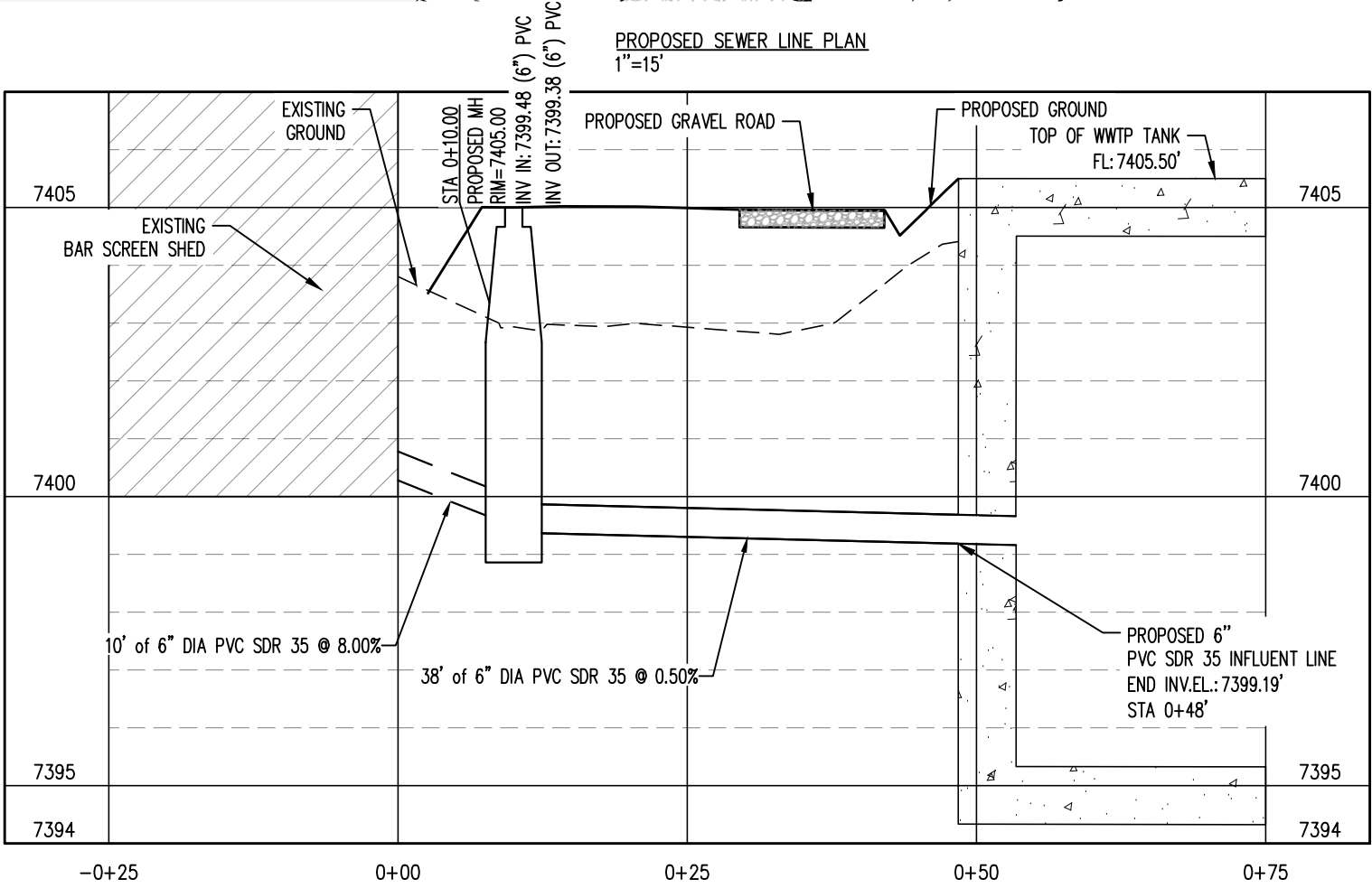
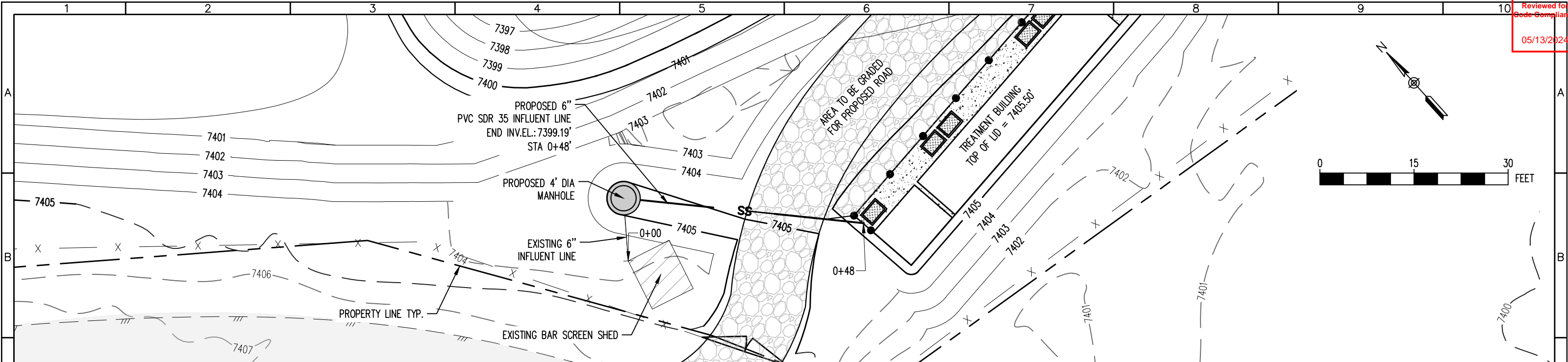
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

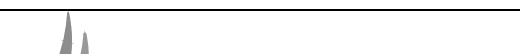

SHEET TITLE:  
PRE DEVELOPMENT DRAINAGE MAP

PROJECT NUMBER:	SCALE:	SHEET:
7830	1"=50'	C7

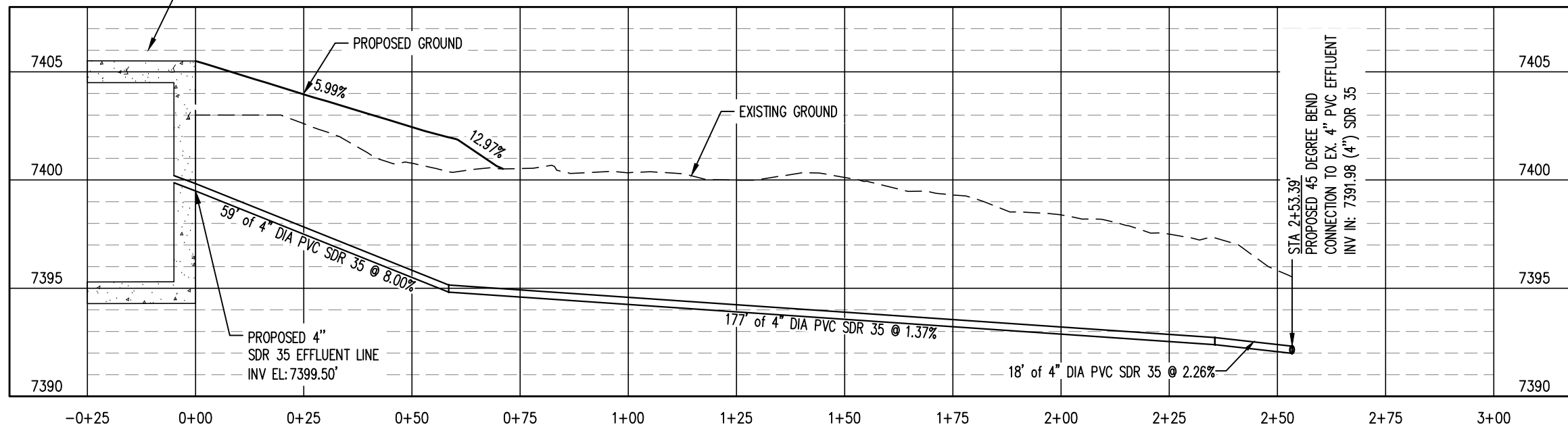
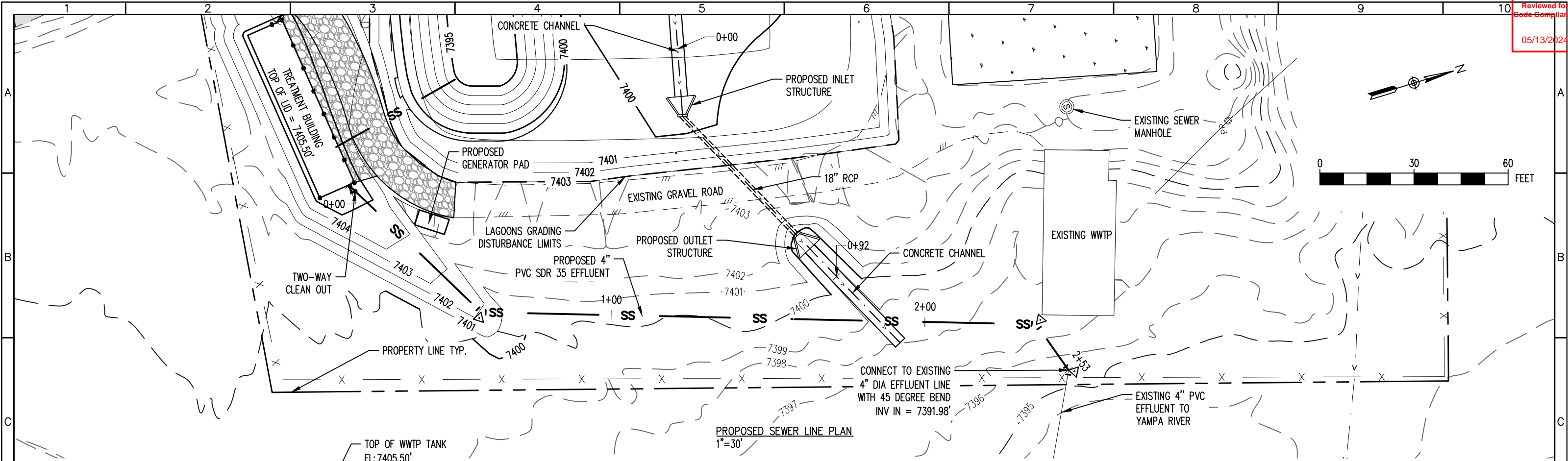






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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER:  7830	SCALE:  H: 1" = 15' V: 1" = 3'	SHEET:  C9	
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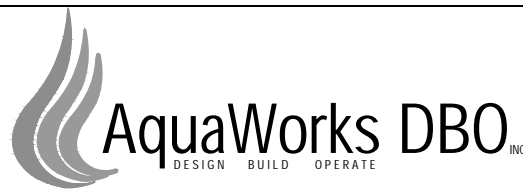


PROPOSED SEWER LINE PROFILE

HORZ. SCALE: 1" = 30'  
VERT. SCALE: 1" = 6'

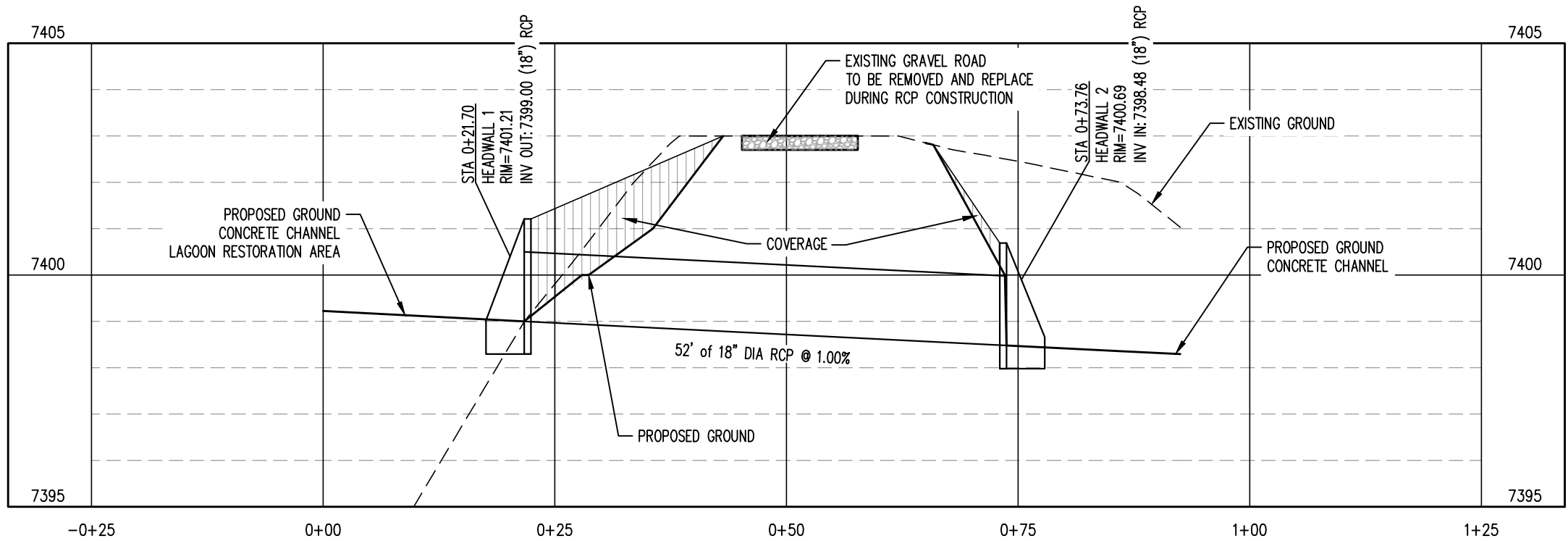
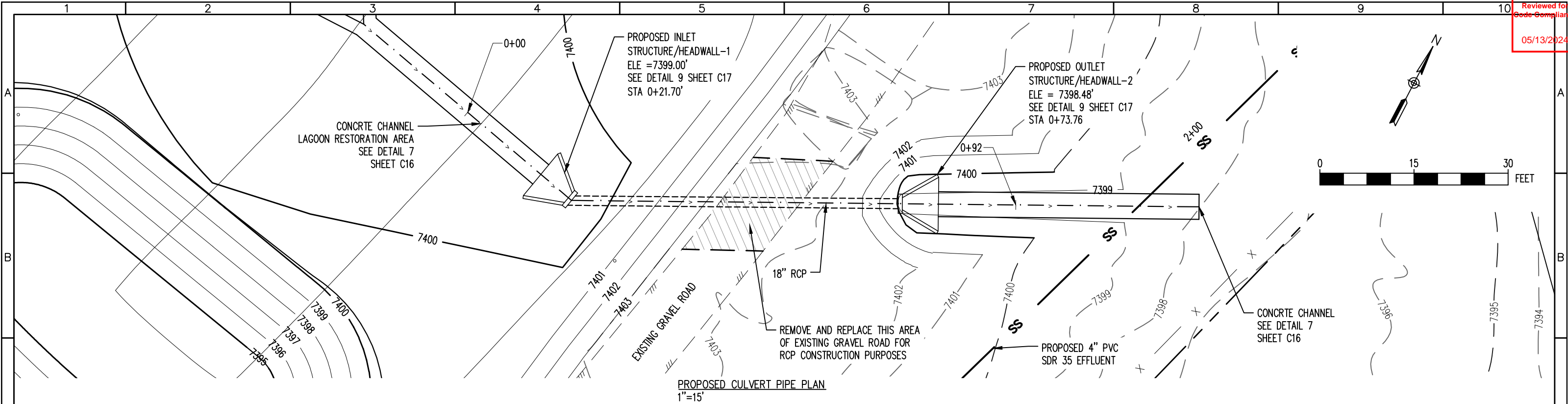


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ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

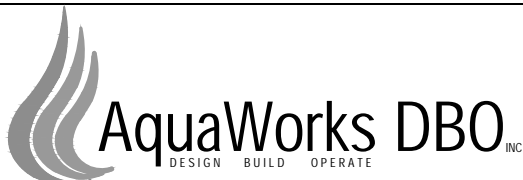
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PROPOSED SEWER LINE PLAN AND PROFILE		
PROJECT NUMBER:	SCALE:	SHEET:
7830	H:1" = 30' V:1" = 6'	C10



PROPOSED 18" RCP PROFILE  
HORZ. SCALE: 1" = 15'  
VERT. SCALE: 1" = 3'



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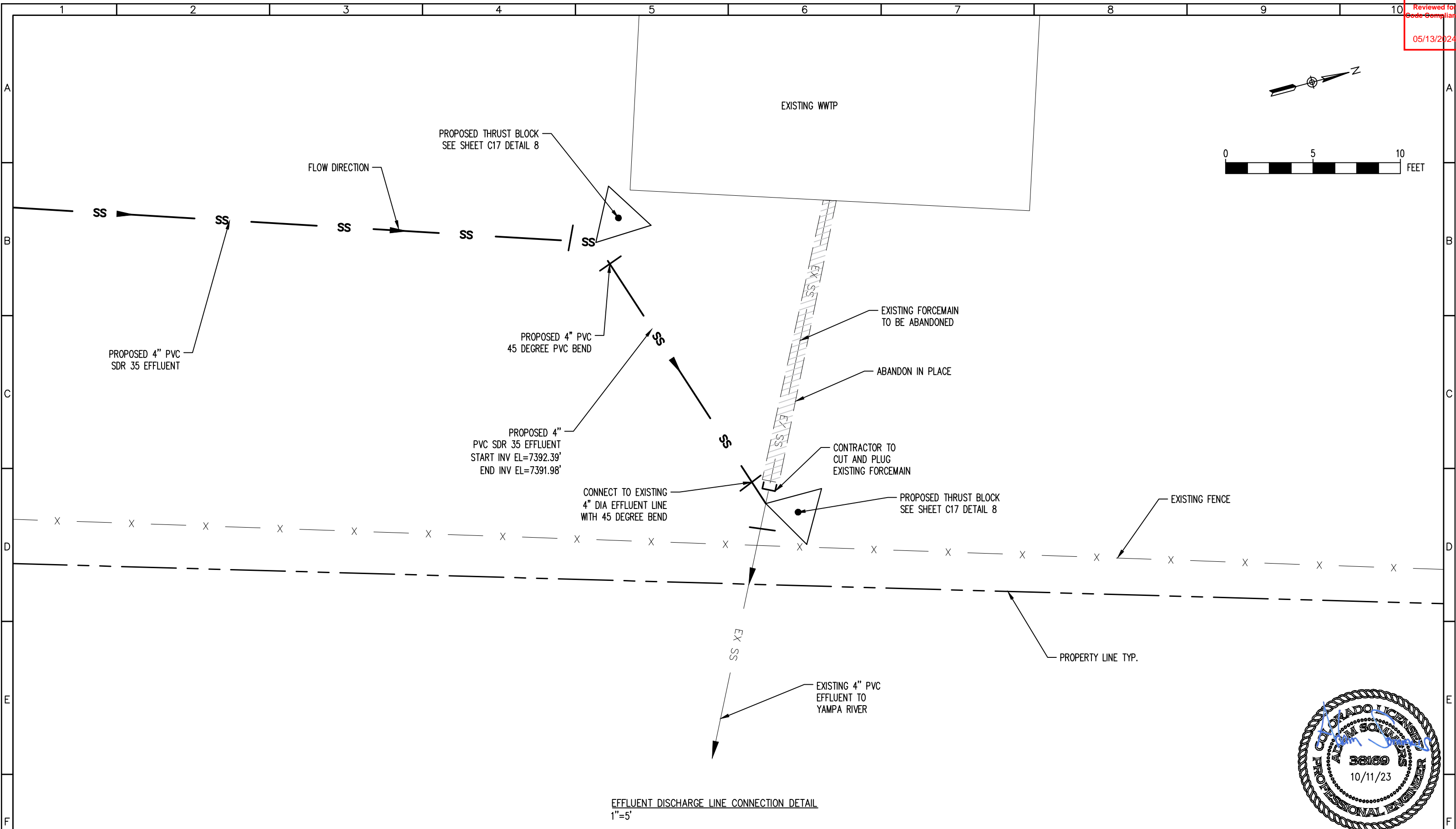


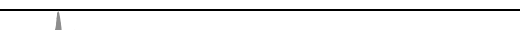
PROJECT: PHIPPSBURG COLORADO WWTP  
COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:		
PROPOSED CULVERT PIPE PLAN AND PROFILE		
PROJECT NUMBER:	SCALE:	SHEET:
7830	H: 1" = 15' V: 1" = 3'	C11







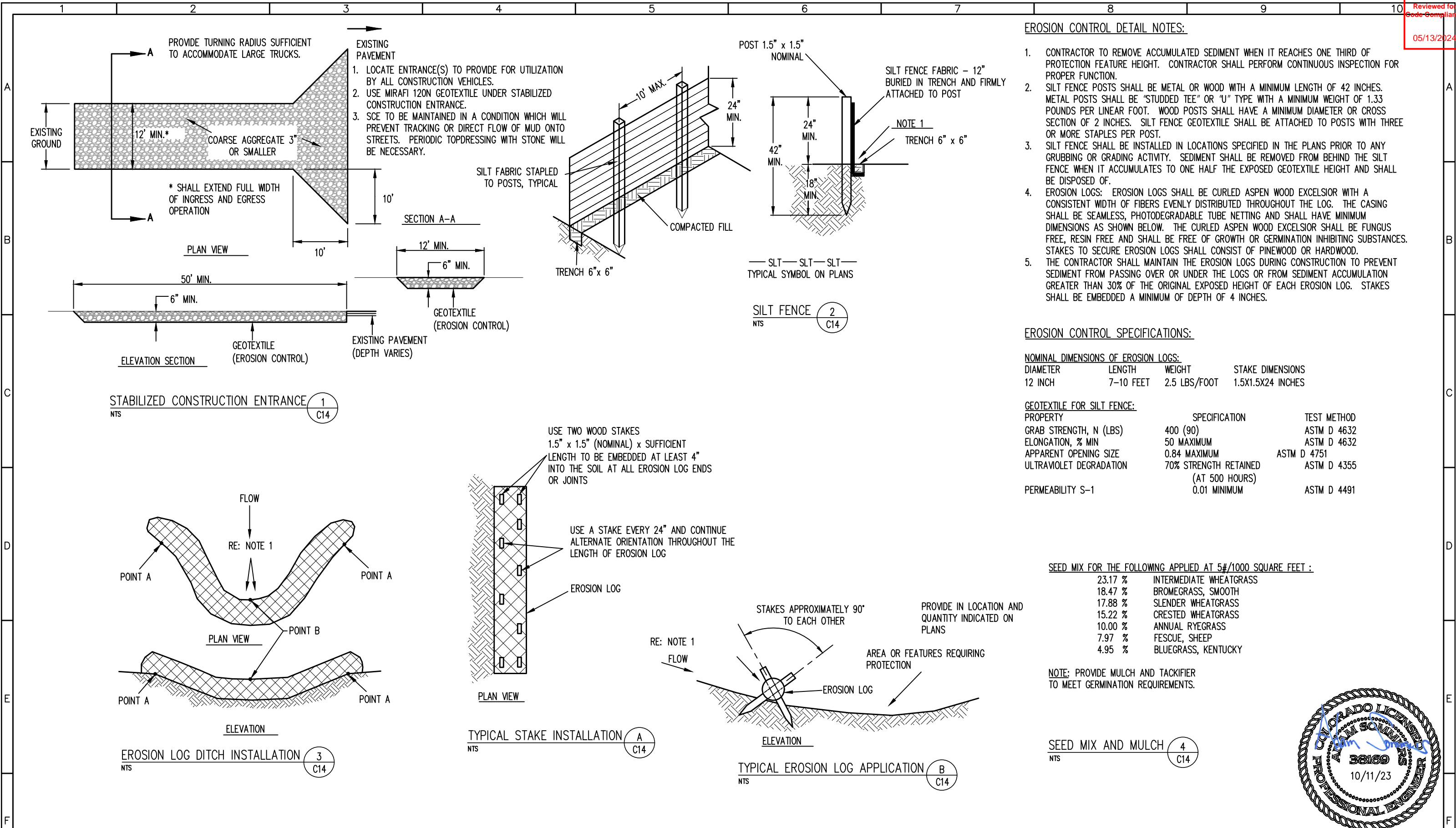
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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER:  7830	SCALE:  1"=5'	SHEET:  C12
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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER:	SCALE:	SHEET:		
				FILE PRINTED ON: 11/8/2023 3:29:34 PM			7830	1"=40'	C13		
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- EROSION CONTROL DETAIL NOTES:**
- CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE THIRD OF PROTECTION FEATURE HEIGHT. CONTRACTOR SHALL PERFORM CONTINUOUS INSPECTION FOR PROPER FUNCTION.
  - SILT FENCE POSTS SHALL BE METAL OR WOOD WITH A MINIMUM LENGTH OF 42 INCHES. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION OF 2 INCHES. SILT FENCE GEOTEXTILE SHALL BE ATTACHED TO POSTS WITH THREE OR MORE STAPLES PER POST.
  - SILT FENCE SHALL BE INSTALLED IN LOCATIONS SPECIFIED IN THE PLANS PRIOR TO ANY GRUBBING OR GRADING ACTIVITY. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT ACCUMULATES TO ONE HALF THE EXPOSED GEOTEXTILE HEIGHT AND SHALL BE DISPOSED OF.
  - EROSION LOGS: EROSION LOGS SHALL BE CURLED ASPEN WOOD EXCELSIOR WITH A CONSISTENT WIDTH OF FIBERS EVENLY DISTRIBUTED THROUGHOUT THE LOG. THE CASING SHALL BE SEAMLESS, PHOTODEGRADABLE TUBE NETTING AND SHALL HAVE MINIMUM DIMENSIONS AS SHOWN BELOW. THE CURLED ASPEN WOOD EXCELSIOR SHALL BE FUNGUS FREE, RESIN FREE AND SHALL BE FREE OF GROWTH OR GERMINATION INHIBITING SUBSTANCES. STAKES TO SECURE EROSION LOGS SHALL CONSIST OF PINWOOD OR HARDWOOD.
  - THE CONTRACTOR SHALL MAINTAIN THE EROSION LOGS DURING CONSTRUCTION TO PREVENT SEDIMENT FROM PASSING OVER OR UNDER THE LOGS OR FROM SEDIMENT ACCUMULATION GREATER THAN 30% OF THE ORIGINAL EXPOSED HEIGHT OF EACH EROSION LOG. STAKES SHALL BE EMBEDDED A MINIMUM OF DEPTH OF 4 INCHES.

**EROSION CONTROL SPECIFICATIONS:**

**NOMINAL DIMENSIONS OF EROSION LOGS:**

DIAMETER	LENGTH	WEIGHT	STAKE DIMENSIONS
12 INCH	7-10 FEET	2.5 LBS/FOOT	1.5X1.5X24 INCHES

**GEOTEXTILE FOR SILT FENCE:**

PROPERTY	SPECIFICATION	TEST METHOD
GRAB STRENGTH, N (LBS)	400 (90)	ASTM D 4632
ELONGATION, % MIN	50 MAXIMUM	ASTM D 4632
APPARENT OPENING SIZE	0.84 MAXIMUM	ASTM D 4751
ULTRAVIOLET DEGRADATION	70% STRENGTH RETAINED (AT 500 HOURS)	ASTM D 4355
PERMEABILITY S-1	0.01 MINIMUM	ASTM D 4491

**SEED MIX FOR THE FOLLOWING APPLIED AT 5#/1000 SQUARE FEET :**

23.17 %	INTERMEDIATE WHEATGRASS
18.47 %	BROMEGRASS, SMOOTH
17.88 %	SLENDER WHEATGRASS
15.22 %	CRESTED WHEATGRASS
10.00 %	ANNUAL RYEGRASS
7.97 %	FESCUE, SHEEP
4.95 %	BLUEGRASS, KENTUCKY

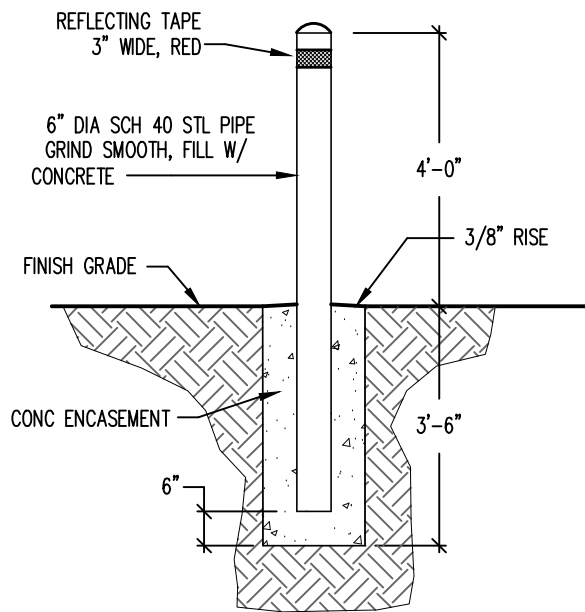
NOTE: PROVIDE MULCH AND TACKIFIER TO MEET GERMINATION REQUIREMENTS.

**SEED MIX AND MULCH**

(4) C14 NTS

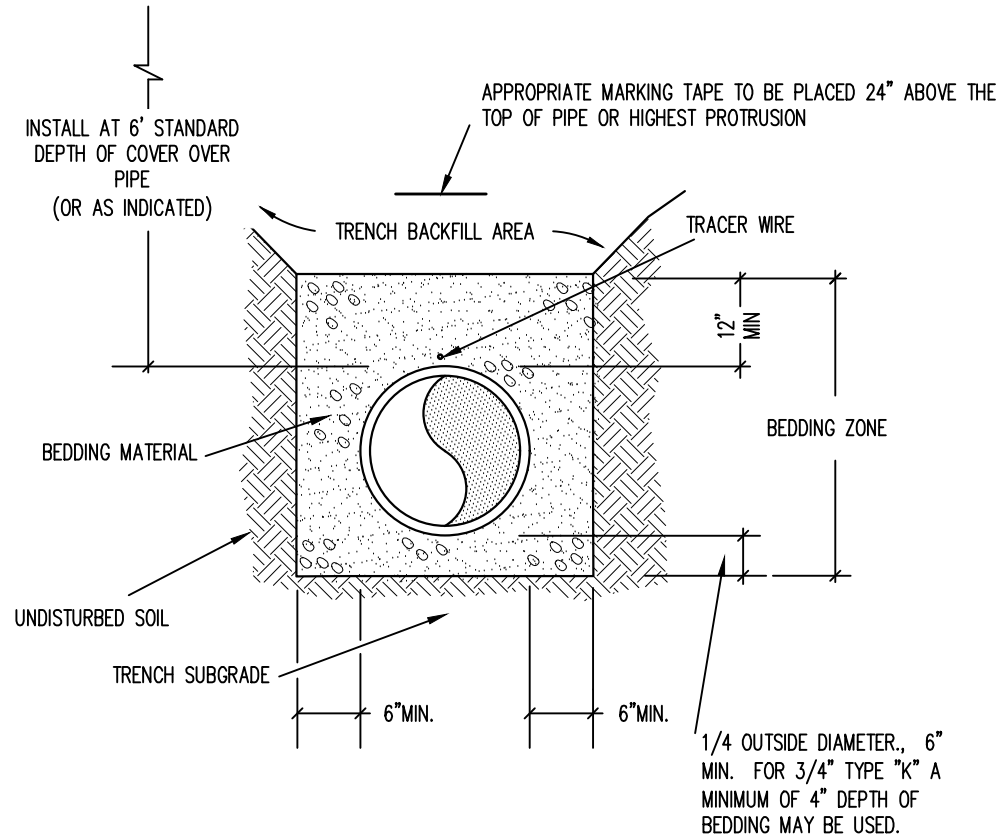
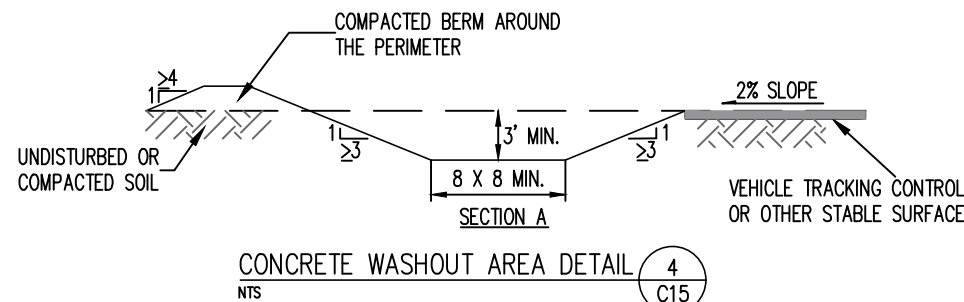
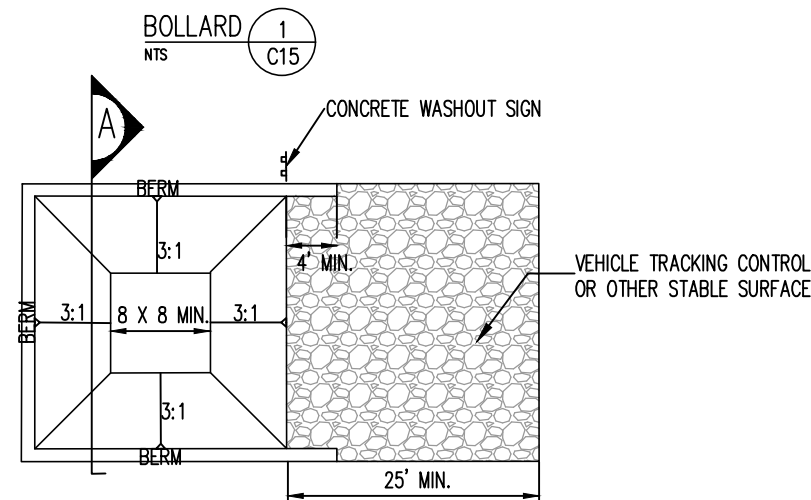


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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER: 7830	SCALE: N.T.S.	SHEET: C14
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NOTES:

1. PROVIDE SUITABLE SUBGRADE FOR STABLE INSTALLATION.
2. ENCASE BOLLARD IN A MINIMUM OF 18" DIAMETER OF CONCRETE TO 4' BELOW GRADE.
3. FILL PIPE WITH CONCRETE AND PROVIDE CLEAN CAP FOR TOP OF PIPE.
4. CONCRETE: CONCRETE MIX SHALL YIELD A COMPRESSIVE STRENGTH OF NOT LESS THAN 4,000 PSI AFTER 28 DAYS. MINIMUM UNCOVERED CURING TIME TO BE 36 HOURS.
5. PROVIDE 7' LONG STEEL PIPE.
6. BOLLARD TO BE COATED WITH ZINC CHROMATE PRIMER PRIOR TO INSTALLATION. 7. PAINT OUTSIDE OF PIPE WITH RUST-RESISTANT PAINT COLOR PER OWNER'S SPECIFICATION.



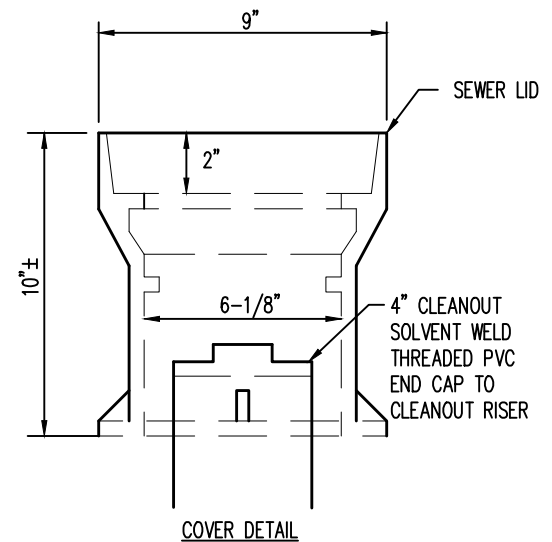
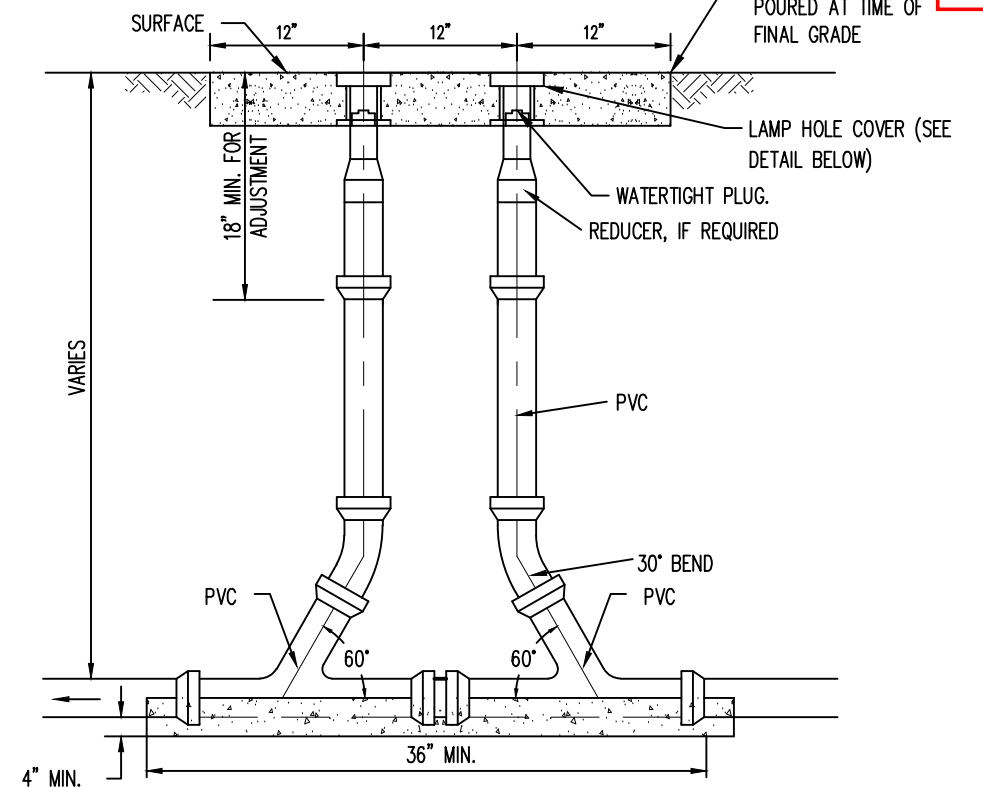
NOTES:

1. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
2. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
3. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D. LIFTS SHALL NOT EXCEED 6". COMPACTION TESTING SHALL BE EVERY FOOT OR PER ROUTT COUNTY REQUIREMENTS.
4. USE ONLY BACKFILL FOR TRENCHES WHICH IS FREE FROM ROCKS, LARGE ROOTS, OTHER VEGETATION OR ORGANIC MATTER, AND FROZEN MATERIAL. NO ROCKS GREATER THAN TWELVE (12) INCHES IN DIAMETER SHALL BE ALLOWED.

PIPE INSTALLATION DETAIL 2  
NTS C15

CONCRETE WASHOUT AREA NOTES:

1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.



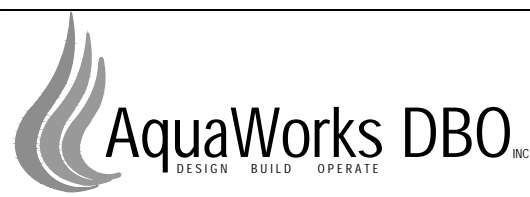
NOTES:

1. COVER SHALL HAVE A LOCKING LID MARKED "SEWER".
2. TYLER SERIES 6855 SLIP TYPE TOP SECTION, D & L SUPPLY SERIES M-8056 OR EQUAL.

DOUBLE CLEANOUT 3  
NTS C15

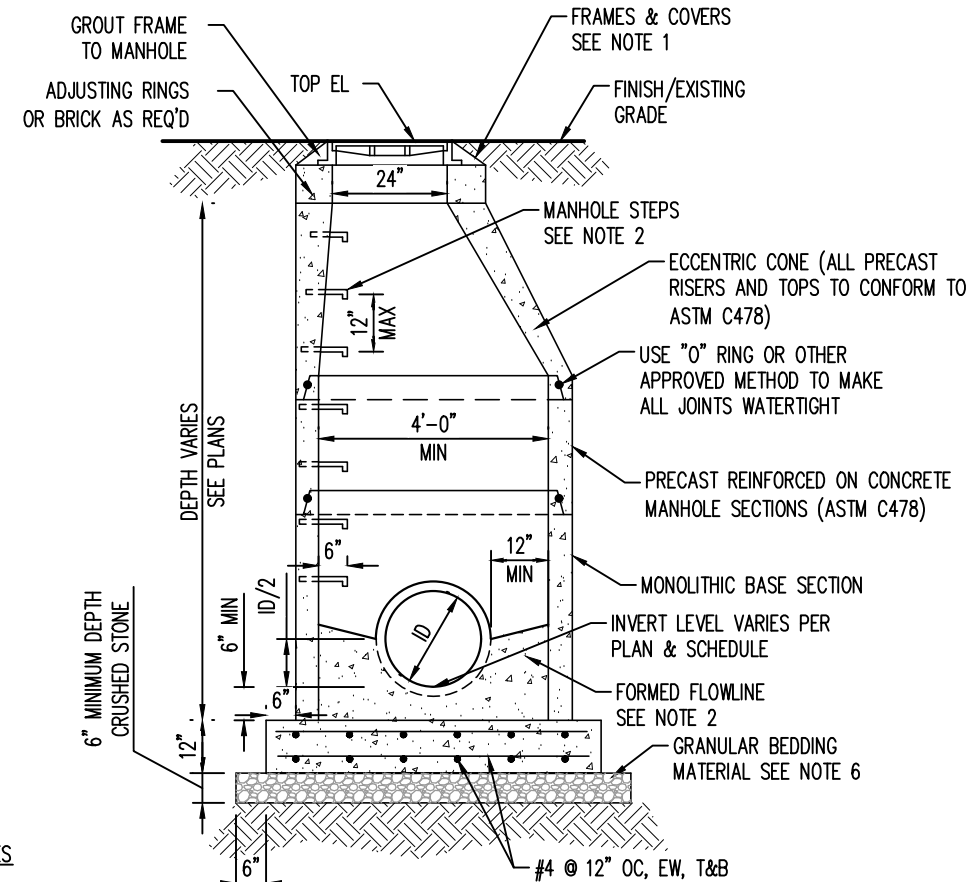


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PROJECT: PHIPPSBURG COLORADO WWTP COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO	SHEET TITLE: CIVIL DETAILS I
ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER: 7830
	SCALE: N.T.S.
	SHEET: C15

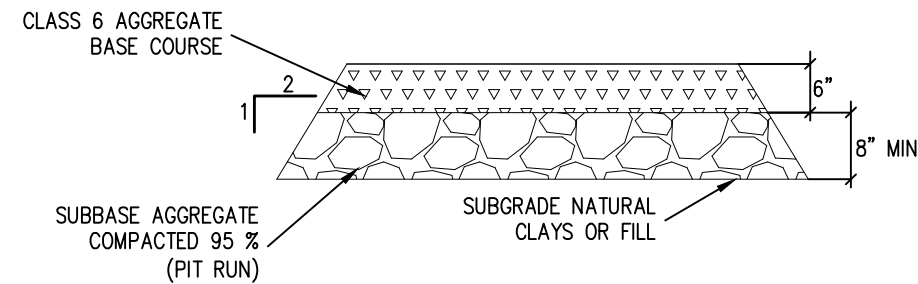




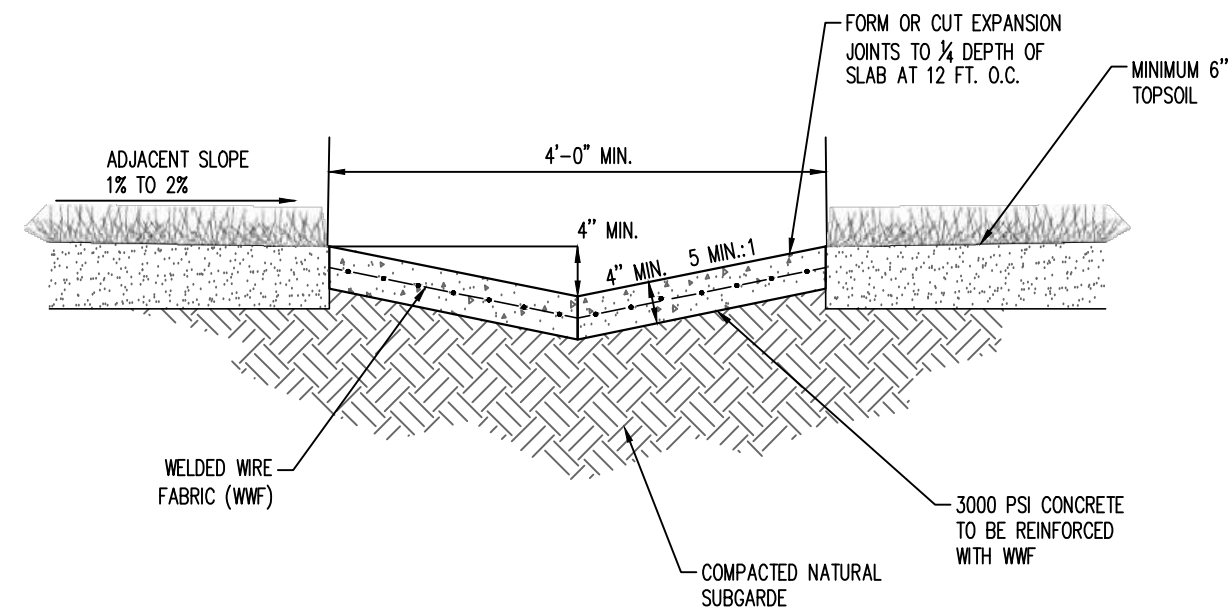
NOTES

1. SANITARY MANHOLE COVERS SHALL HAVE "SANITARY SEWER" CAST ON THE COVER AND SHALL BE NEENAH R-1688 OR ENGINEER APPROVED EQUIVALENT. STORM MANHOLE COVERS SHALL HAVE "STORM SEWER" CAST ON THE COVER AND SHALL BE NEENAH R-1678 OR ENGINEER APPROVED EQUIVALENT.
2. MANHOLE STEPS TO BE M.A. INDUSTRIES 004-501-DF OR ENGINEER APPROVED EQUIVALENT. PROVIDED TO WITHIN 12" OF TOP OF CONE.
3. FLOWLINE OF MANHOLE MAY BE FORMED IN CONCRETE; BUILT UP WITH MORTAR; OR BY LAYING A PIPE THROUGH MANHOLE, THE TOP BEING BROKEN OUT LATER.
4. GROUT ANNULAR SPACE BETWEEN WALL AND PIPE WITH NON-SHRINK MORTAR TO INSURE WATERTIGHT SEAL.
5. ALL CONCRETE TO COMPLY WITH ACI 318 AND SHALL BE A MINIMUM STRENGTH OF 3000 PSI AT 28 DAY TEST.
6. ALL MANHOLES AND SPECIAL STRUCTURES TO BE PLACED ON SUITABLE SUBGRADE MATERIAL. IF SUBGRADE CONDITIONS WARRANT, UNSUITABLE FOUNDATION MATERIAL WILL BE OVEREXCAVATED, AND SELECT SUBGRADE MATERIAL WILL BE PLACED AS PER SECTION 5.00 OF THE WCPM STANDARD CONSTRUCTION SPECIFICATIONS.
7. GRANULAR BEDDING MATERIAL SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO T-180.

CONCRETE MANHOLE DETAIL (5) N.T.S. C16



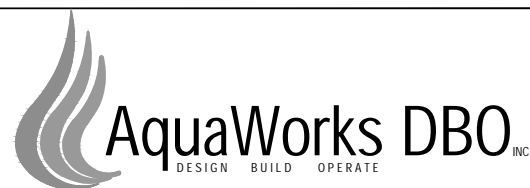
DRIVEWAY SECTION DETAIL (6) N.T.S. C16



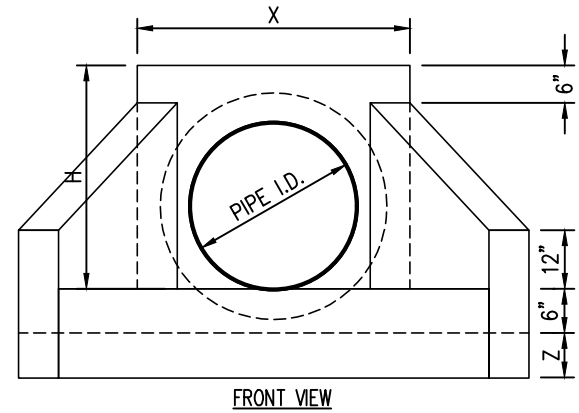
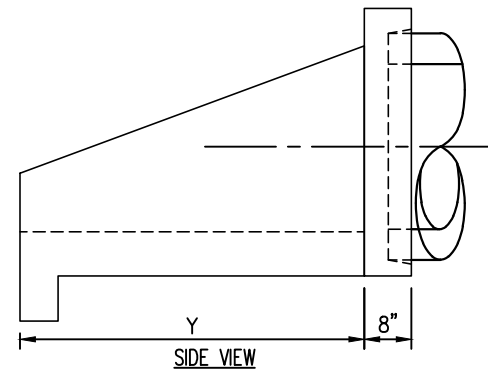
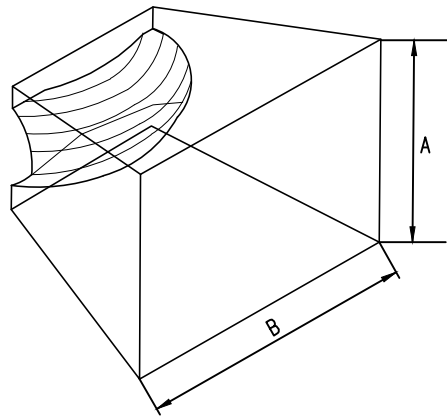
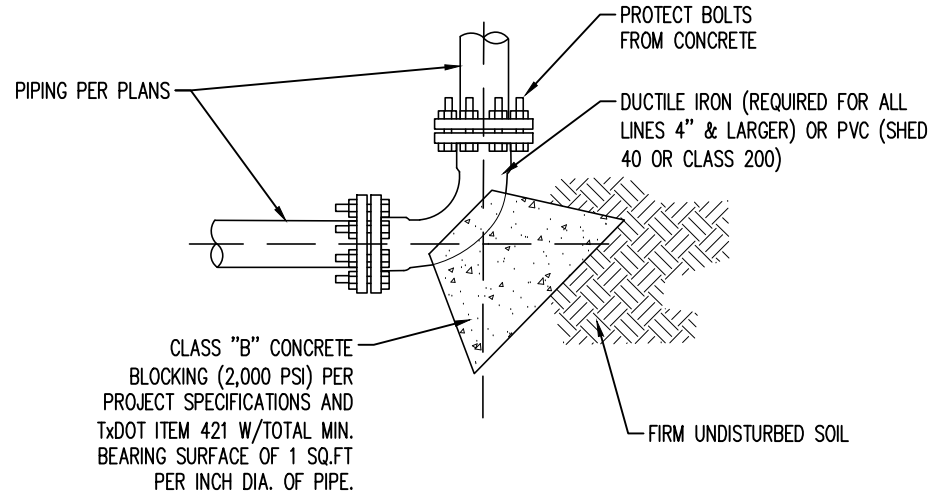
DETENTION BASIN TRICKLE CHANNEL FOR DRAINAGE CATCHMENTS <5 ACRES (7) N.T.S. C16



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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: 7830	SCALE: N.T.S.	SHEET: C16

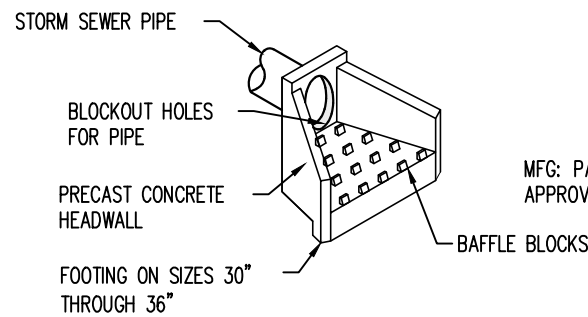


### DIMENSIONS FOR CONCRETE THRUST BLOCKS

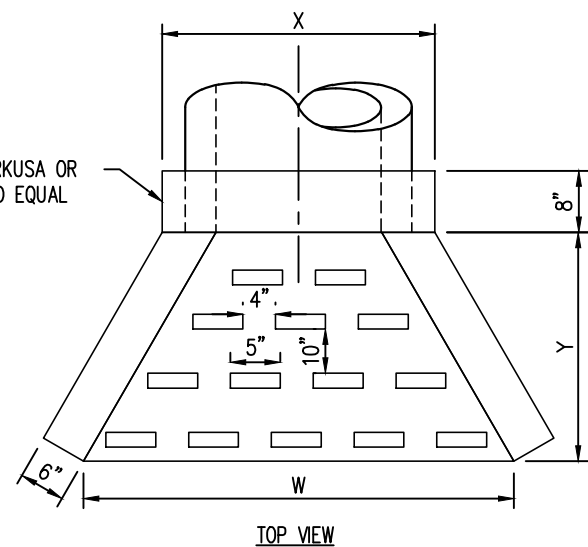
PIPE DIA. SIZE (INCHES)	MINIMUM SOIL BEARING AREA REQUIRED (SQUARE FEET)	TYPICAL DIMENSIONS OF BEARING AREA IN INCHES (A X B)	TYPICAL VOLUME OF CONC. REQUIRED (CUBIC FEET)*
2	2.0	12" X 24"	3.0
2 1/2	2.5	15" X 24"	4.0
3	3.0	16" X 27"	4.5
4	4.0	18" X 32"	6.0
6	6.0	24" X 36"	9.0
8	8.0	29" X 40"	12.0
10	10.0	30" X 48"	15.0
12	12.0	36" X 48"	18.0
14	14.0	36" X 56"	21.0
16	16.0	39" X 59"	24.0
18	18.0	42" X 62"	27.0

#### NOTES

BLOCKING REQUIRED ON ALL FITTINGS 2" & LARGER. ALL REQUIRED BENDS & FITTINGS MAY NOT BE LABELLED ON THE PLANS. PIPE MAY BE CURVED UP TO 75% OF MANUFACTURERS RECOMENED MAXIMUM CURVATURE WITHOUT A BEND AS APPROVED BY OWNER & ENGINEER. PVC FITTINGS TO BE PROTECTED FROM CONCRETE WITH A WRAPPING OF 30" ROOFING FELT.



MODEL	PIPE DIA	DIMENSIONS					
		H	W	X	Y	Z	WEIGHT (LBS)
HW-12	12"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-15	15"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-18	18"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,600
HW-21	21"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,300
HW-24	24"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,200
HW-30	30"	3'-6"	7'-6"	4'-1"	4'-0"	9"	6,200
HW-36	36"	4'-1"	9'-3"	4'-8"	5'-0"	9"	8,100
HW-42	42"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000
HW-48	48"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000



#### SPECIFICATIONS

CONCRETE:  
CLASS II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION INCLUDING WALLS AND FLOOR.

REINFORCEMENT:  
GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE LATEST ACI STANDARDS.

\* VARIES CONSIDERABLY W/DISTANCE BETWEEN PIPE AND BEARING POINT

TYPICAL BLOCKING DETAILS  
N.T.S.

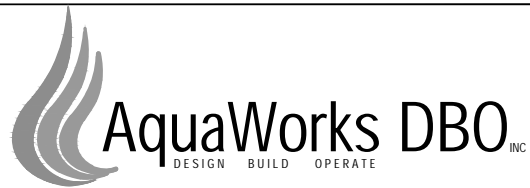
8  
C17

CONCRETE HEADWALL  
NTS

9  
C17



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COMMUNITY OF PHIPPSBURG  
ROUTT COUNTY, COLORADO  
ENGINEER: AQUAWORKS DBO, INC.  
3252 WILLIAMS STREET  
DENVER, COLORADO 80205  
(303) 477-5915

SHEET TITLE:		
CIVIL DETAILS III		
PROJECT NUMBER:	SCALE:	SHEET:
7830	N.T.S.	C17





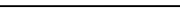

- CIVIL CONSTRUCTION NOTES:
- INSTALL GRATING BETWEEN BUILDING FANS AND OUTSIDE LOUVERS.
  - THERMAL INSULATION ON WALLS AND CEILING, SPRAY FOAM
  - DOOR COLOR TO BE: WHITE
  - EXTERIOR COLOR TO BE: WHITE
  - INTERIOR FLOOR TO BE: MARINE GRADE PLYWOOD
  - INTERIOR FLOOR TO BE PAINTED: GATOR GUARD
  - EXTERIOR FLOOR TO BE INSULATED WITH 3 INCHES OF SPRAY FOAM.

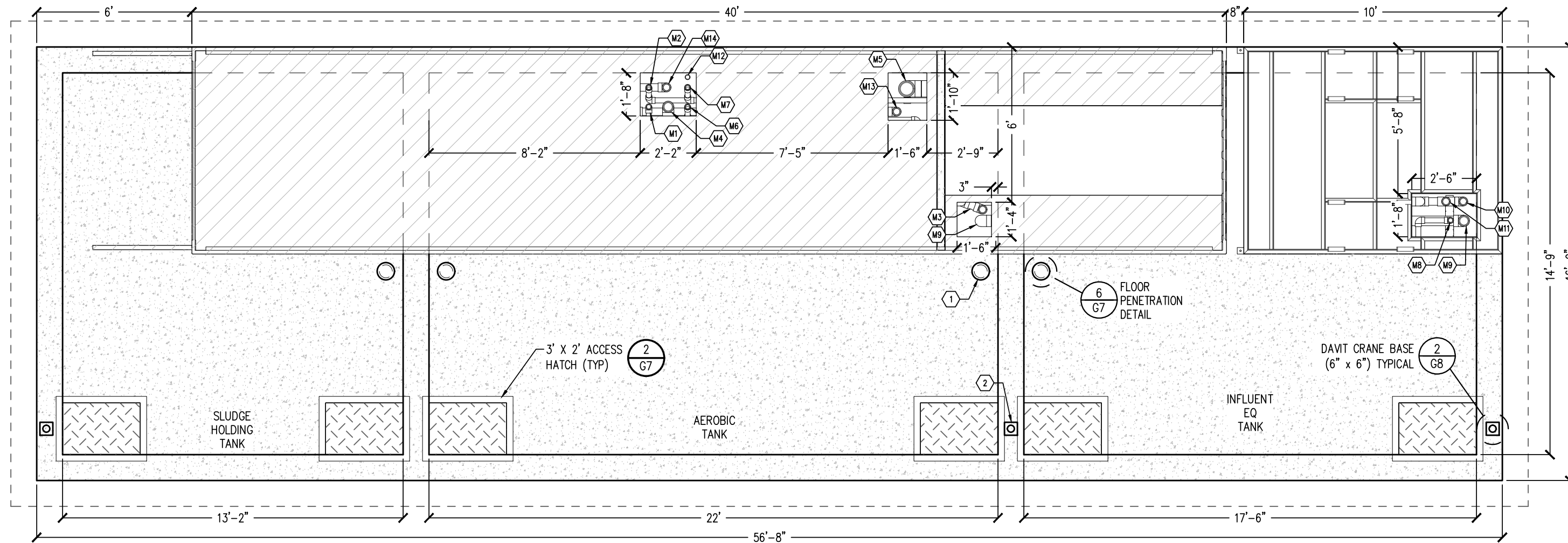
- MECHANICAL NOTES:
- LOCATE THERMOSTAT IN THE WARMEST LOCATION AT CEILING LEVEL.
  - PLUG AND SEAL (WITH WASHERS) ANY HOLES IN THE FLOOR TO CONTAIN WATER SPILLS.
  - MAXIMUM WIDTH FOR SHIPPING IS 102". THIS INCLUDES ALL CONNECTIONS THAT PROTRUDE THROUGH THE SIDES OF THE ENCLOSURE.

- COMMISSIONING NOTES:
- FAN AND LOUVER HOODS NEED TO BE INSTALLED ON SITE. SYSTEM CANNOT SHIP WITH HOODS ATTACHED.
  - SOME FLOW METERS WILL BE SHIPPED WITH THE UNIONS IN THE PROCESS PIPING LOOSENED TO ENSURE METERS ARE NOT DAMAGED DURING SHIPMENT.
  - BUILDINGS NEED TO BE SHIMMED ON SITE WITH ½" T X 3" W STEEL FLAT BARS TO ALLOW DOORS TO OPEN FREELY. PLEASE HAVE SHIMMING MATERIAL READY DURING BUILDING INSTALLATION.

- NEWTERRA STANDARD SYSTEM LABELS:
- FLOW DIRECTION LABELS
  - AIR LINE LABELS
  - WATER LINE LABELS
  - HOT SURFACE LABEL
  - HEARING PROTECTION LABELS
  - WATER LABEL: THIS EQUIPMENT IS AUTOMATICALLY CONTROLLED
  - ARC FLASH WARNING LABEL



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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER:  #2479	SCALE:  3/32" = 1'-0"	SHEET:  P1
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CONCRETE TANK LID PLAN  
1/4" = 1'-0"

PROCESS NOTES:

- 1 4" VENT
- 2 DAVIT CRANE BASE

PIPING CONNECTION NOTES:

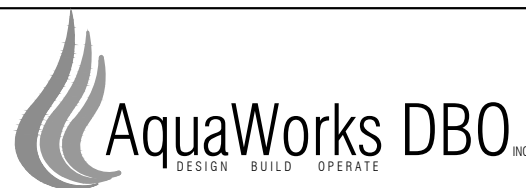
- M1 2" AIR TO SLUDGE DIGESTION
- M2 2" AIR TO INF EQ TANK
- M3 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M4 4" AIR TO AEROBIC TANK
- M5 6" MBR TANK OVERFLOW TO AEROBIC TANK
- M6 2" AERATION TANK PUMP 1 TO MBR TANK 1
- M7 2" AERATION TANK PUMP 2 TO MBR TANK 2
- M8 2" INFLUENT EQ PUMP TO BARSCREEN
- M9 4" FINE SCREEN TO AEROBIC TANK
- M10 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)
- M11 3" OVERFLOW TO INF EQ TANK (SCREEN OVERFLOW)
- M12 2" CHEMICAL SLEEVE PIPE TO AEROBIC TANK
- M13 3" SYSTEM EFFLUENT
- M14 3" OVERFLOW TO SLUDGE TANK

GENERAL NOTES:

- 1) ALL PIPING SCH 80 PVC UNLESS NOTED OTHERWISE
- 2) INSTALL GREEN DRAIN ONE WAY VALVE OR EQUAL OVER ALL FLOOR DRAINS
- 3) CONTRACTOR TO FILL ALL FOUR VOIDS IN THE NEWTERRA FLOOR WITH GROUT. GROUT AROUND FLOOR DRAINS M3 & M10.

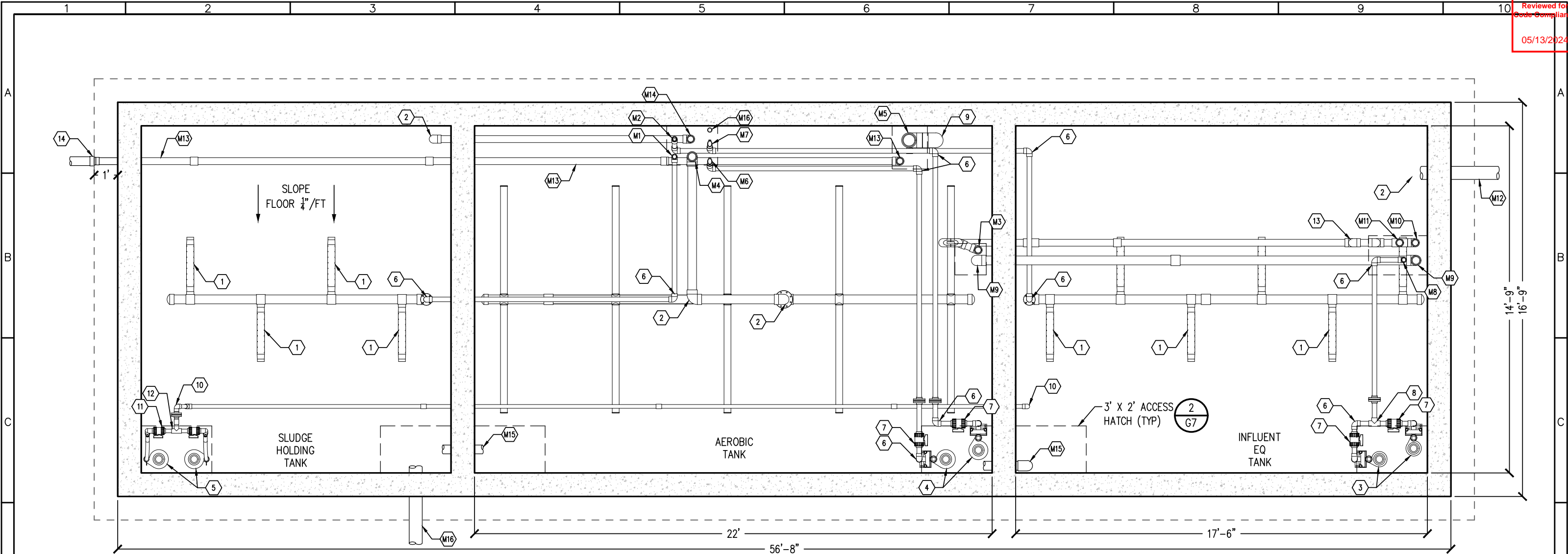


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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P2





CONCRETE TANK EQUIPMENT PLAN  
1/4" = 1'-0"

PROCESS NOTES:

- |   |                          |    |                        |
|---|--------------------------|----|------------------------|
| 1 | DIFFUSER (DETAIL 4/G7)   | 10 | 1.5" 90 ELBOW          |
| 2 | 4" 90 ELBOW              | 11 | 1.5" BALL VALVE        |
| 3 | INFLUENT EQ PUMPS        | 12 | 1.5" TEE               |
| 4 | MBR FEED FORWARD PUMPS   | 13 | 3" 90 ELBOW            |
| 5 | SLUDGE SUPERNATANT PUMPS | 14 | 4"X3" GASKETED REDUCER |
| 6 | 2" 90 ELBOW              |    |                        |
| 7 | 2" BALL VALVE            |    |                        |
| 8 | 2" TEE                   |    |                        |
| 9 | 6" 90 ELBOW              |    |                        |

PIPING CONNECTION NOTES:

- |    |  |     |  |
|----|--|-----|--|
| M1 | 2" AIR TO SLUDGE DIGESTION               | M9  | 4" FINE SCREEN TO AEROBIC TANK               |
| M2 | 2" AIR TO INF EQ TANK                    | M10 | 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN)     |
| M3 | 3" OVERFLOW TO INF EQ TANK (FLOOR DRAIN) | M11 | 3" OVERFLOW TO INF EQ TANK (SCREEN OVERFLOW) |
| M4 | 4" AIR TO AEROBIC TANK                   | M12 | 6" INFLUENT FROM COLLECTION SYSTEM           |
| M5 | 6" MBR TANK OVERFLOW TO AEROBIC TANK     | M13 | 3" SYSTEM EFFLUENT                           |
| M6 | 2" AERATION TANK PUMP 1 TO MBR TANK 1    | M14 | 3" OVERFLOW TO SLUDGE TANK                   |
| M7 | 2" AERATION TANK PUMP 2 TO MBR TANK 2    | M15 | 4" BASIN OVERFLOW                            |
| M8 | 2" INFLUENT EQ PUMP TO BARSCREEN         | M16 | 6" OVERFLOW TO OVERFLOW POND                 |

GENERAL NOTES:

- 1) ALL PIPING SCH 80 PVC UNLESS NOTED OTHERWISE
- 2) INSTALL GREEN DRAIN ONE WAY VALVE OR EQUAL OVER ALL FLOOR DRAINS
- 3) CONTRACTOR TO FILL ALL FOUR VOIDS IN THE NEWTERRA FLOOR WITH GROUT. GROUT AROUND FLOOR DRAINS M3 & M10.

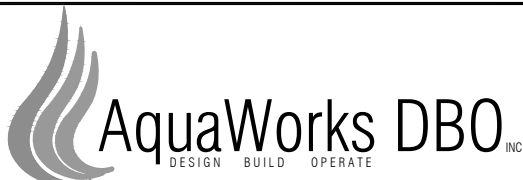
TANK COATINGS

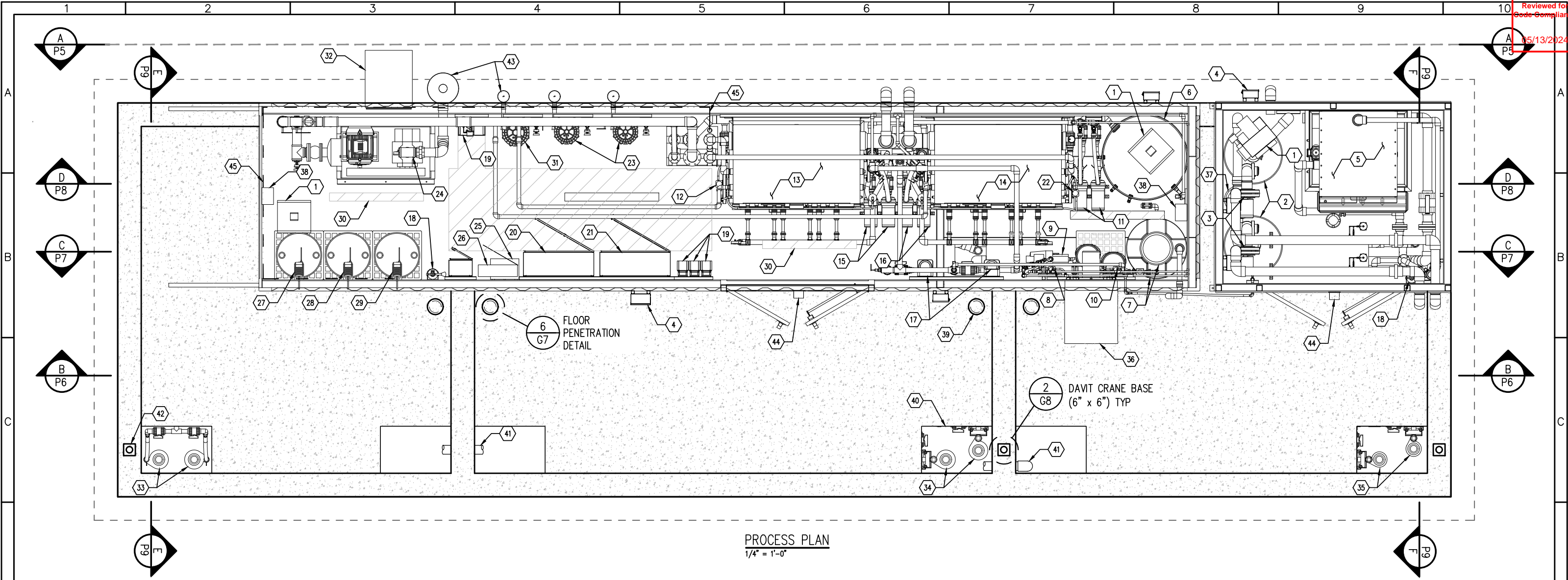
COAT INFLUENT EQUALIZATION TANK INTERIOR WALLS AND UNDERSIDE OF LID. SYSTEM TYPE: EPOXY, SHERWIN WILLIAMS OR EQUAL.

1. SURFACE PREPARATION: SSPC-SP 13/NACE 6 WITH A SURFACE PROFILE OF ICRI CSP 2 OR 3.
2. FILLER: FILL BUG HOLES, AIR POCKETS AND OTHER VOIDS WITH STEEL-SEAM FT910.
3. FINISH: DURA-PLATE 6000 REINFORCED EPOXY. DFT 60.0 TO 80.0 MILS.



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				DESIGNED BY: AS	ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER: #2479
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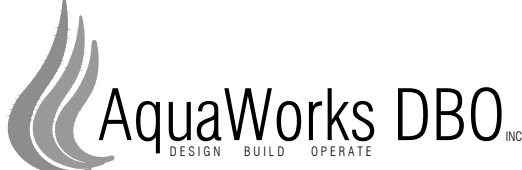


PROCESS PLAN  
1/4" = 1'-0"

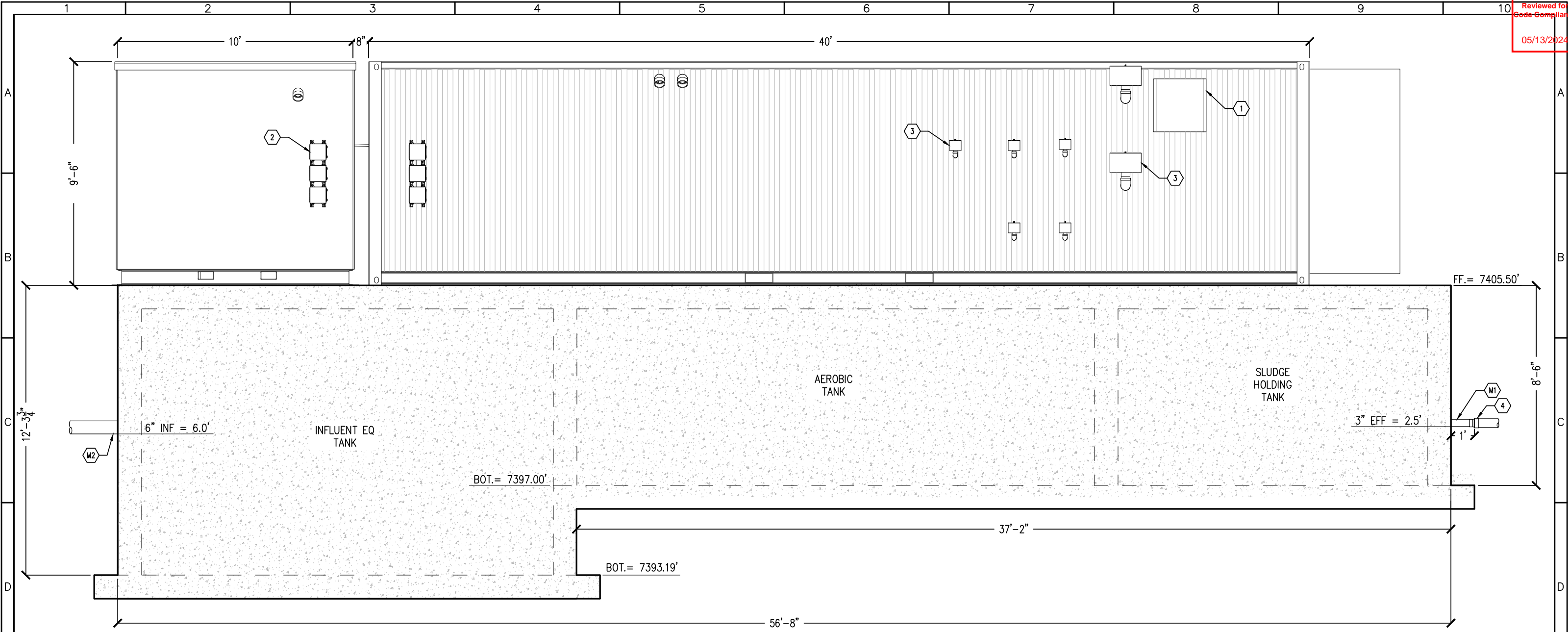
PROCESS NOTES:

- |  |                                     |  |                                 |
|--|-------------------------------------|--|---------------------------------|
| 1 HEATER                               | 15 PERMEATE PUMPS FOR MBR 1         | 29 ALUM CHEM FEED SYSTEM                     | 43 BLOWER MUFFLER               |
| 2 ODOR CONTROL VESSEL                  | 16 PERMEATE PUMPS FOR MBR 2         | 30 BUILDING LIGHTS (TYP 4)                   | 44 OVERHEAD LIGHT               |
| 3 VENTILATION BLOWER                   | 17 UV REACTORS                      | 31 MBR BLOWERS                               | 45 CHEMICAL FEED CARRIER TUBING |
| 4 ELECTRICAL JUNCTION BOX (TYP)        | 18 FIRE EXTINGUISHER                | 32 24" LOUVER & HOOD                         |                                 |
| 5 INLET FINE SCREEN (2MM)              | 19 VARIABLE FREQUENCY DRIVES        | 33 SUPERNATANT TRANSFER PUMPS                |                                 |
| 6 BACKWASH TANK                        | 20 MASTER POWER PANEL               | 34 MEMBRANE FEED PUMPS                       |                                 |
| 7 HOUSE WATER STORAGE TANK             | 21 MASTER CONTROL PANEL             | 35 EQ TRANSFER PUMPS                         |                                 |
| 8 SODIUM HYPOCHLORITE CHEM FEED SYSTEM | 22 PRIME/AIR BLEED PUMP FOR MBR 2   | 36 24" FAN & HOOD                            |                                 |
| 9 HOUSE WATER SUPPLY PUMP              | 23 EQ & SLUDGE HOLDING TANK BLOWERS | 37 LIQUID SEPARATOR                          |                                 |
| 10 CITRIC ACID CHEM FEED SYSTEM        | 24 AEROBIC TANK BLOWERS             | 38 EYEWASH STATION WALL MOUNT MAASTERS 8 GAL |                                 |
| 11 BACKWASH PUMPS                      | 25 TRANSFORMER                      | 39 4" VENT SCH 80 PVC (TYP)                  |                                 |
| 12 PRIME AIR/BLEED PUMP FOR MBR 1      | 26 PANELBOARD                       | 40 3' X 2' ACCESS HATCH (TYP)                |                                 |
| 13 MEMBRANE (MBR) TANK 1               | 27 MICRO-C CHEM FEED SYSTEM         | 41 4" OVERFLOW PVC SCH 80                    |                                 |
| 14 MEMBRANE (MBR) TANK 2               | 28 CAUSTIC CHEM FEED SYSTEM         | 42 DAVIT CRANE BASE (TYP)                    |                                 |



REV. No:	DATE:	BY:	REVISION DESCRIPTION:	DRAWN BY: NM		PROJECT: WWTP IMPROVEMENT PROJECT COMMUNITY OF PHIPPSBURG ROUTT COUNTY, COLORADO ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	SHEET TITLE: PROCESS PLAN		
				DESIGNED BY: AS			PROJECT NUMBER: #2479		
				FILE PRINTED ON: 10/12/2023 4:02:56 PM			SCALE: 1/4" = 1'-0"		
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PROCESS SECTION A  
1/4"=1'-0"

PROCESS NOTES:

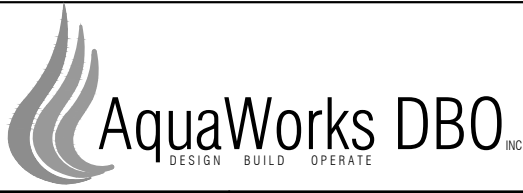
- 1 24" LOUVER & HOOD
- 2 ELECTRICAL JUNCTION BOX (TYP)
- 3 BLOWER MUFFLER (TYP)
- 4 4"x3" GASKETED REDUCER

EQUIPMENT CONNECTION NOTES:

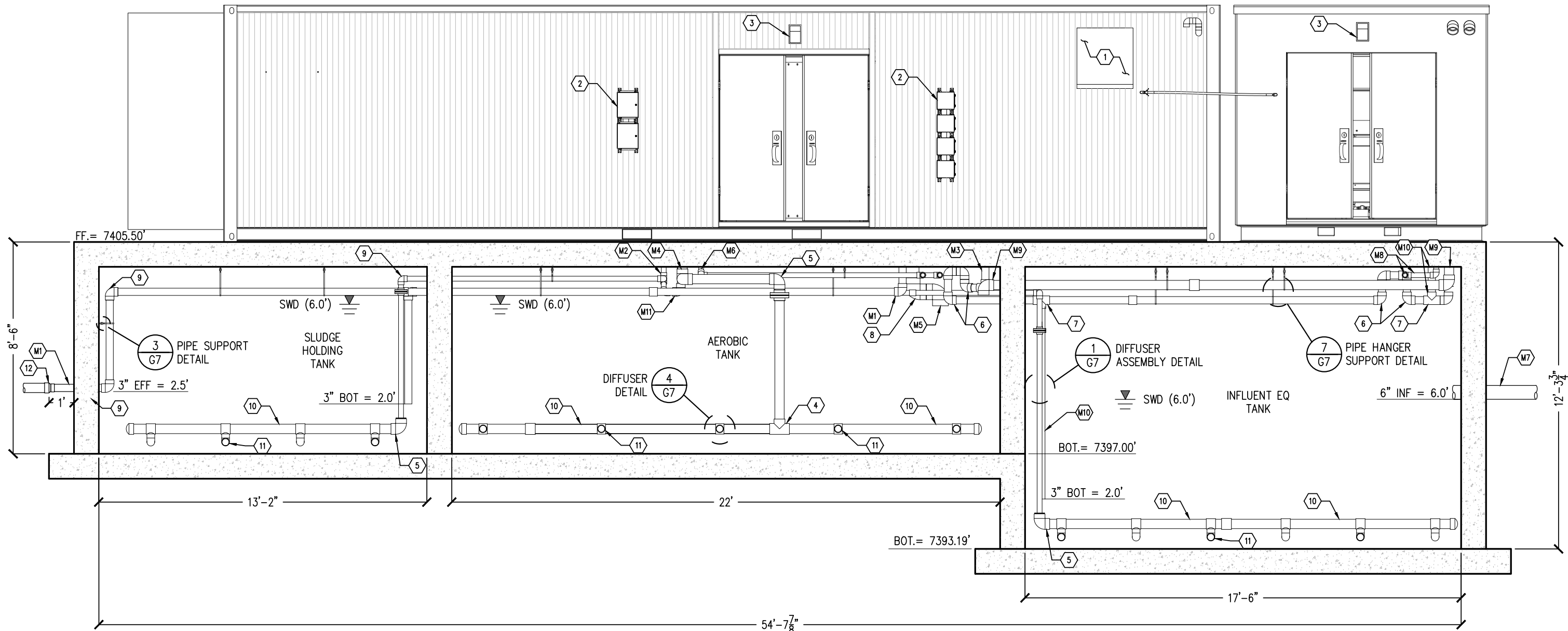
- M1 3" SYSTEM EFFLUENT
- M2 6" INFLUENT FROM COLLECTION SYSTEM



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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P5



PROCESS SECTION **B**  
1/4"=1'-0" **P4**

**PROCESS NOTES:**

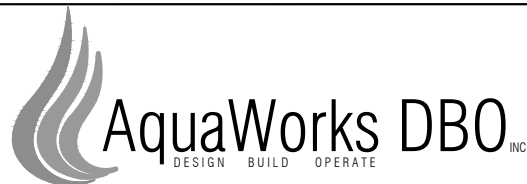
- 1 24" FAN & HOOD
- 2 ELECTRICAL JUNCTION BOX (TYP)
- 3 EXTERIOR LIGHT
- 4 4" TEE
- 5 4" 90 ELBOW
- 6 3" 90 ELBOW
- 7 3" TEE
- 8 6" 90 ELBOW
- 9 2" 90 ELBOW
- 10 4" DIFFUSER HEADER
- 11 DIFFUSER
- 12 4"x3" GASKETED REDUCER

**PIPING CONNECTION NOTES:**

- M1 3" SYSTEM EFFLUENT
- M2 2" AIR TO SLUDGE HOLDING TANK
- M3 3" OVERFLOW TO SLUDGE TANK (FLOOR DRAIN)
- M4 4" AIR TO AEROBIC TANK
- M5 6" MBR TANK OVERFLOW TO AEROBIC TANK
- M6 2" AEROBIC TANK PUMP 1 TO MBR TANK 1
- M7 6" INFLUENT FROM COLLECTION SYSTEM
- M8 2" INFLUENT EQ PUMP TO BARSCREEN
- M9 4" FINE SCREEN TO AERATION TANK
- M10 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW)
- M11 3" OVERFLOW TO SLUDGE TANK

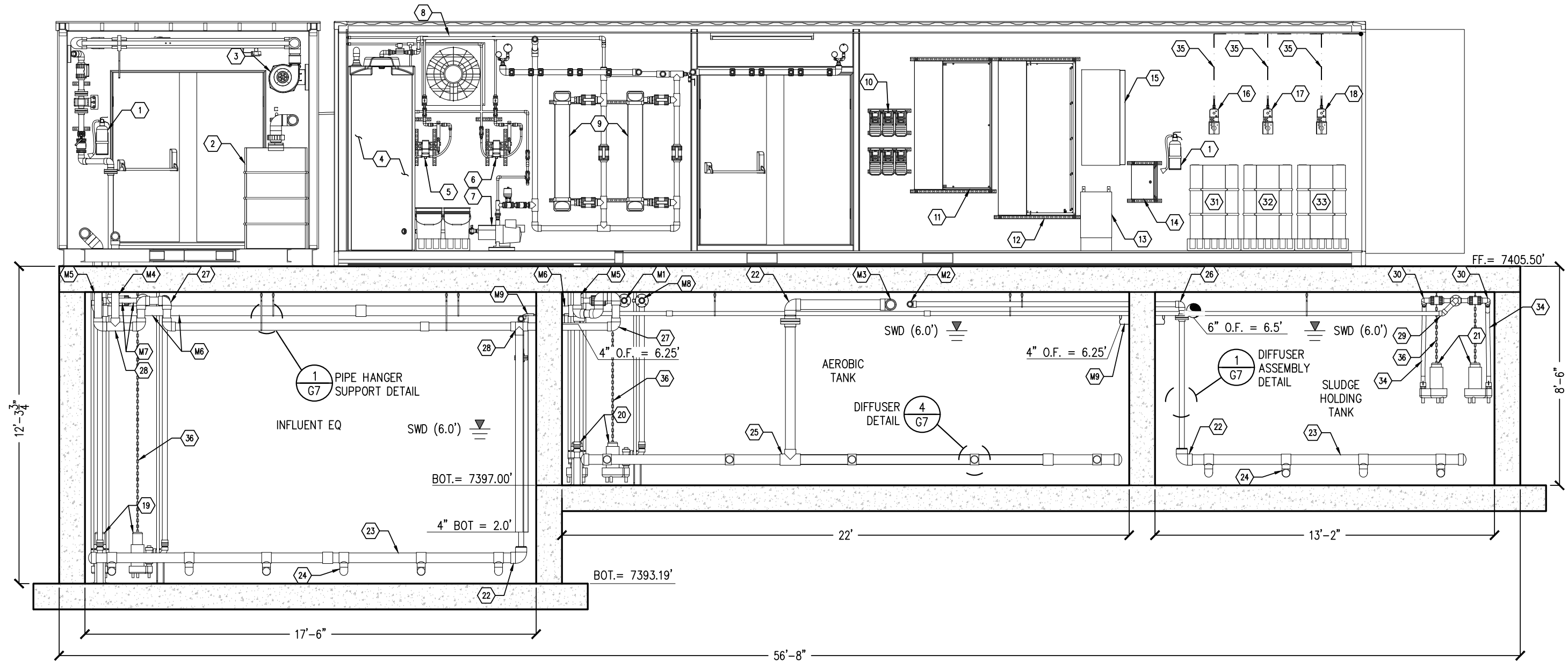


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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P6





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

PROCESS NOTES:

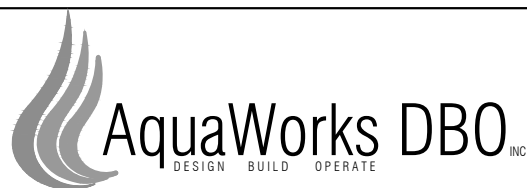
- |  |  |                               |
|--|--|-------------------------------|
| (1) FIRE EXTINGUISHER                        | (10) VARIABLE FREQUENCY DRIVES (TYP 6) | (19) INFLUENT EQ PUMPS        |
| (2) ODOR CONTROL VESSEL                      | (11) MASTER CONTROL PANEL              | (20) MBR FEED FORWARD PUMPS   |
| (3) VENTILATION BLOWER                       | (12) MASTER POWER PANEL                | (21) SLUDGE SUPERNATANT PUMPS |
| (4) HOUSE WATER STORAGE TANK, 225 GAL        | (13) TRANSFORMER                       | (22) 4" 90 ELBOW              |
| (5) CITRIC ACID CHEMICAL FEED SYSTEM         | (14) TRANSFORMER DISCONNECT PANEL      | (23) 4" DIFFUSER HEADER       |
| (6) SODIUM HYPOCHLORITE CHEMICAL FEED SYSTEM | (15) PANELBOARD                        | (24) DIFFUSER                 |
| (7) PRESSURIZED WATER SUPPLY PUMP            | (16) ALUM CHEMICAL FEED SYSTEM         | (25) 4" TEE                   |
| (8) BUILDING FAN                             | (17) CAUSTIC CHEMICAL FEED SYSTEM      | (26) 2" 90 ELBOW              |
| (9) UV REACTORS (TYP 2)                      | (18) MICRO-C CHEMICAL FEED SYSTEM      | (27) 3" 90 ELBOW              |

PIPING CONNECTION NOTES:

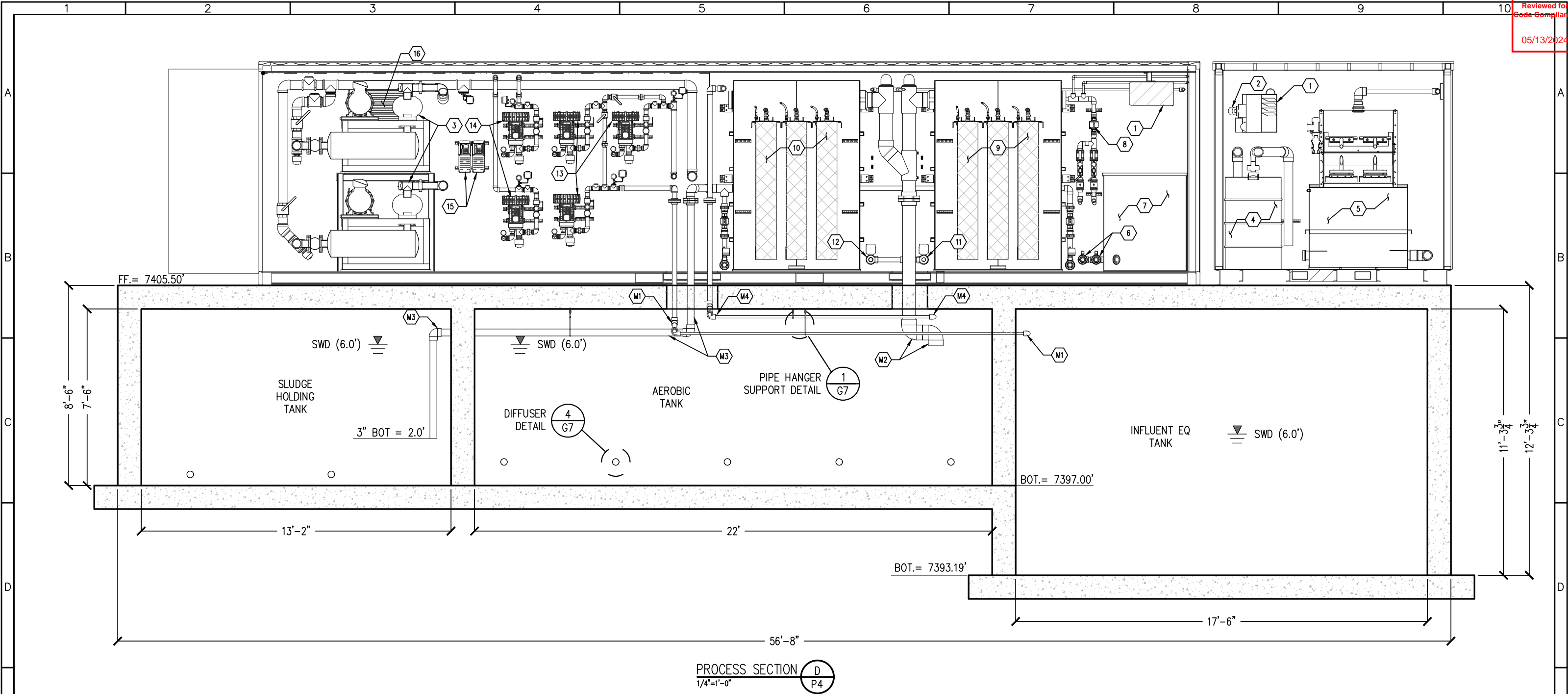
- |   |   |
|---|---|
| (M1) 2" AEROBIC TANK PUMP 2 TO MBR TANK 2     | (M8) 2" AEROBIC TANK PUMP 1 TO MBR TANK 1 |
| (M2) 2" AIR TO SLUDGE HOLDING TANK            | (M9) 4" BASIN OVERFLOW                    |
| (M3) 4" AIR TO AEROBIC TANK                   |   |
| (M4) 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW) |   |
| (M5) 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)     |   |
| (M6) 4" FINE SCREEN TO AEROBIC TANK           |   |
| (M7) 2" INF EQ TANK TO FINE SCREEN            |   |



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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P7



PROCESS NOTES:

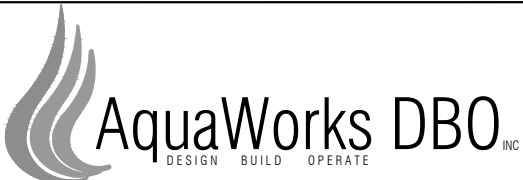
- |   |                             |    |                                  |
|---|-----------------------------|----|----------------------------------|
| 1 | HEATER                      | 9  | MEMBRANE BIOREACTOR (MBR) TANK 1 |
| 2 | VENTILATION BLOWER          | 10 | MEMBRANE BIOREACTOR (MBR) TANK 2 |
| 3 | AEROBIC TANK BLOWERS        | 11 | PERMEATE PUMPS FOR MBR 1         |
| 4 | ODOR CONTROL VESSEL         | 12 | PERMEATE PUMPS FOR MBR 2         |
| 5 | AUTOMATIC FINE SCREEN (2MM) | 13 | EQ/SLUDGE HOLDING TANK BLOWERS   |
| 6 | BACKWASH PUMPS              | 14 | MBR BLOWERS                      |
| 7 | BACKWASH TANK               | 15 | VARIABLE FREQUENCY DRIVES        |
| 8 | PRIME AIR/BLEED SYSTEM      | 16 | 24" LOUVER & HOOD                |

PIPING CONNECTION NOTES:

- |    |                                      |
|----|--------------------------------------|
| M1 | 2" AIR TO INFLUENT EQ TANK           |
| M2 | 6" MBR TANK OVERFLOW TO AEROBIC TANK |
| M3 | 3" OVERFLOW TO SLUDGE TANK           |
| M4 | 2" AEROBIC TANK PUMP 1 TO MBR TANK 1 |

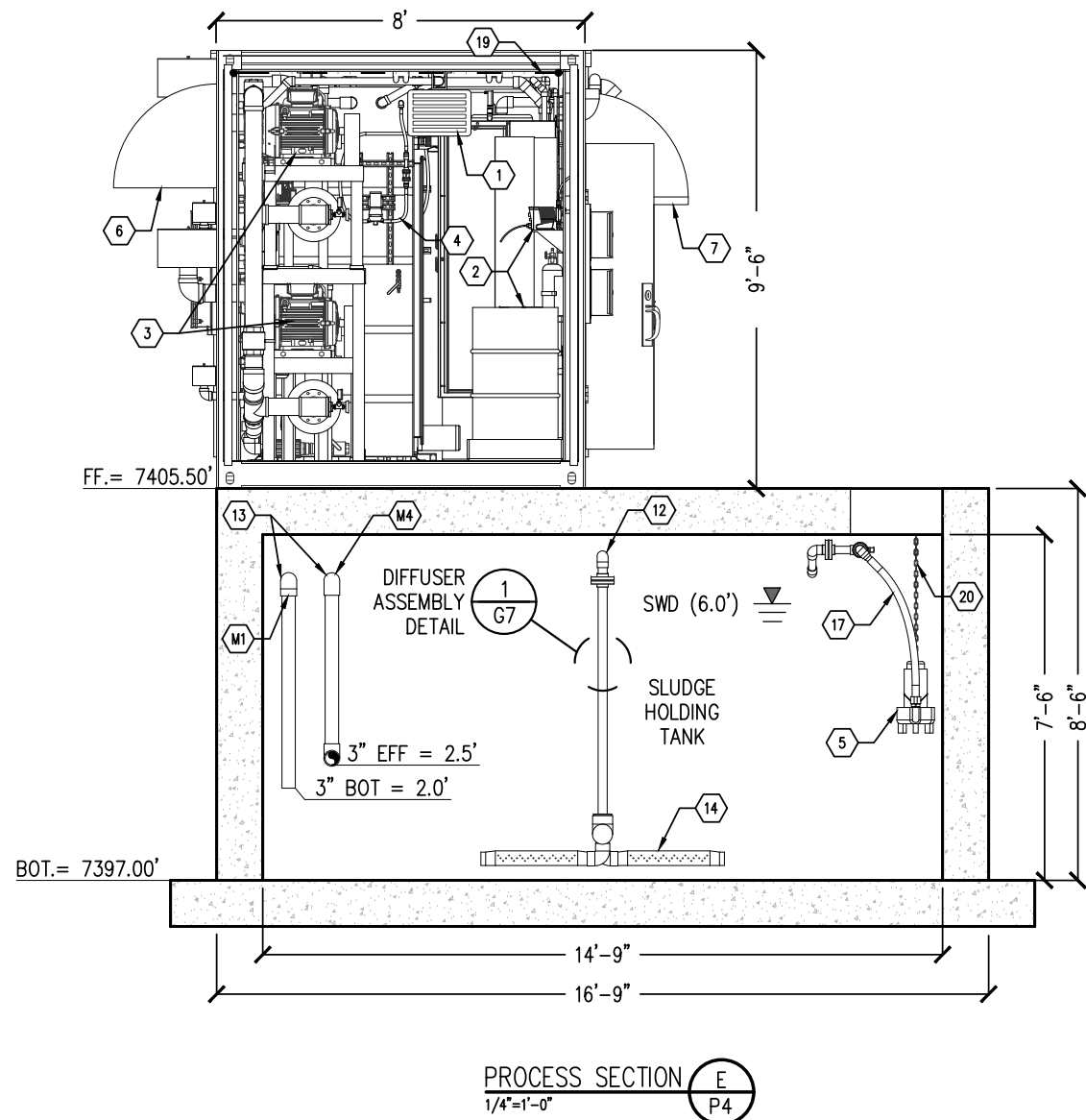


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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915			PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P8



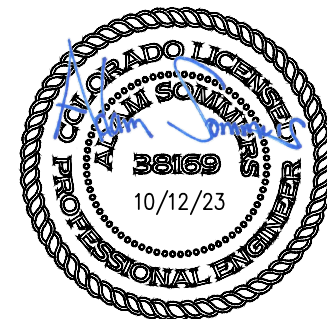
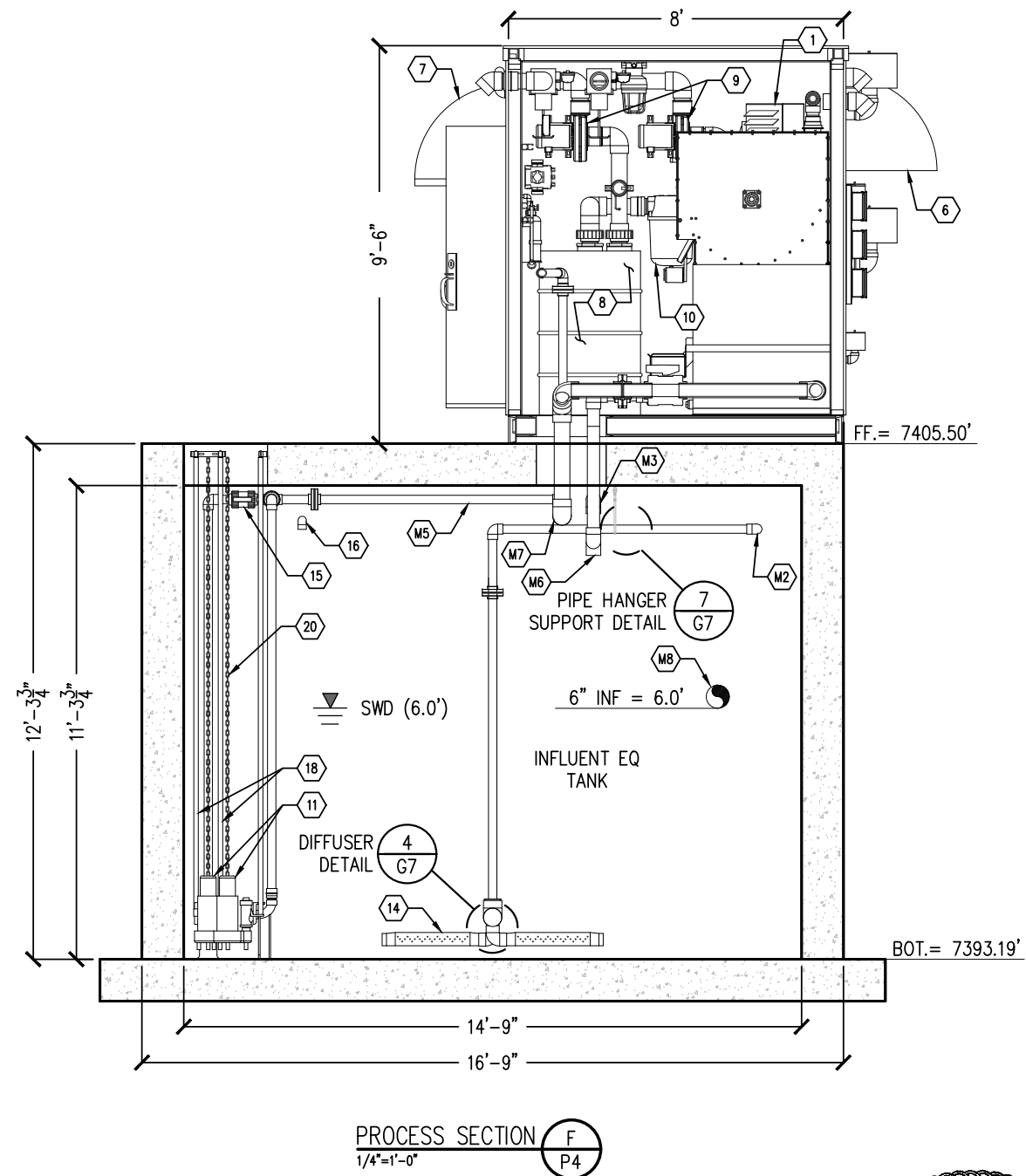


**PROCESS NOTES:**

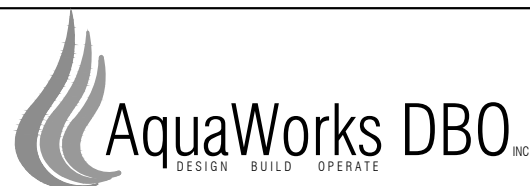
- |                         |                      |                                      |
|-------------------------|----------------------|--------------------------------------|
| 1 HEATER                | 10 LIQUID SEPARATOR  | 18 PUMP GUIDE RAILS                  |
| 2 ALUM CHEM FEED SYSTEM | 11 EQ TRANSFER PUMPS | 19 CHEM FEED CONDUIT (2" SCH 80 PVC) |
| 3 AEROBIC TANK BLOWERS  | 12 2" 90 ELBOW       | 20 LIFTING CHAIN                     |
| 4 PRIME/AIR BLEED PUMP  | 13 3" 90 ELBOW       |                                      |
| 5 SUPERNATANT PUMP      | 14 DIFFUSER          |                                      |
| 6 24" LOUVER & HOOD     | 15 2" BALL VALVE     |                                      |
| 7 24" FAN & HOOD        | 16 1.5" 90 ELBOW     |                                      |
| 8 ODOR CONTROL VESSELS  | 17 1.5" FLEX TUBE    |                                      |
| 9 VENTILATION BLOWER    |                      |                                      |

**PIPING CONNECTION NOTES:**

- |    |  |
|----|--|
| M1 | 3" OVERFLOW TO SLUDGE TANK               |
| M2 | 2" AIR TO INFLUENT EQ TANK               |
| M3 | 3" OVERFLOW TO EQ TANK (FLOOR DRAIN)     |
| M4 | 3" SYSTEM EFFLUENT                       |
| M5 | 2" INFLUENT EQ PUMP TO INLET SCREEN      |
| M6 | 3" OVERFLOW TO EQ TANK (SCREEN OVERFLOW) |
| M7 | 4" SCREEN TO AEROBIC TANK                |
| M8 | 6" INFLUENT FROM COLLECTION SYSTEM       |



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ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915		PROJECT NUMBER: #2479	SCALE: 1/4" = 1'-0"	SHEET: P9

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9

10

Valves and Piping

NO

NC

BALL VALVE

GATE VALVE

GLOBE VALVE

NEEDLE VALVE

SLIDE VALVE

SOLENOID VALVE

BUTTERFLY VALVE

SWING CHECK VALVE

WAFER CHECK VALVE

SPRING CHECK VALVE

WYE STRAINER

SAMPLE PORT

PRESSURE RELIEF VALVE

VACUUM RELIEF VALVE

CAMLOCK CONNECTION

FLEXIBLE CONNECTION

FLANGED CONNECTION

REDUCER

UNION

ADSORBENT FILTER

COALESCING FILTER

PARTICULATE FILTER

FILTER, SILENCER

PRESSURE REGULATOR

REGULATOR W/ FILTER

EQUIPMENT

AIR STRIPPER

OIL WATER SEPARATOR

SEAL FLUID SEPARATOR

BAG FILTER

CARBON VESSEL

OXIDIZER

PRODUCT STORAGE DRUM, TANK

STANDARD, CONICAL BOTTOM TANK

EQUIPMENT

CLOSED TOP TANK

OPEN TOP TANK

OPEN TOP TANK WITH LID

AIR DIFFUSER ASSEMBLY

STRAINER/FILTER

MEMBRANE CASSETTE

NO CLOG SPRAYER ASSEMBLY

ULTRA VIOLET LIGHT

ROTARY SCREEN

FILTER PRESS

EQUIPMENT

CENTRIFUGAL PUMP

PROGRESSIVE-CAVITY PUMP

CHEMICAL-INJECTION PUMP

CENTRIFUGAL, REGENERATIVE BLOWER

POSITIVE DISPLACEMENT BLOWER

ROTARY-CLAW BLOWER

LINEAR BLOWER

LIQUID-RING PUMP

ROTARY-VANE COMPRESSOR

RECIPROCATING COMPRESSOR

PASSIVE COOLING FINS

EDUCTOR

MAGNETIC FLOW METER

VENTURI

ROTOMETER

AS - AIR STRIPPER

BLD - BUILDING, TRAILER, OR SKID

FLT - FILTER VELLEL

LPC - LIQUID-PHASE CARBON VESSEL

MFD - MANIFOLD

OWS - OIL/WATER SEPARATOR

OX - OXIDIZER

PST - PRODUCT STORAGE TANK

SOS - SEAL OIL SEPARATOR

SWS - SEAL WATER SEPARATOR

TNK - TANK

VLS - VAPOR/LIQUID SEPARATOR

VPC - VAPOR-PHASE CARBON VESSEL

INSTRUMENTATION IDENTIFIERS

FIRST LETTERS		SUCCEEDING LETTERS			
	MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C	CYCLE	CONTROL		CONTROL	CLOSE
D		DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			
G	GAS (LEL)		GLASS, GAUGE, VIEWING DEVICE		
H	HAND			HAND	HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MONITOR			MOTORIZED	MIDDLE, INTERMED
N					
O			ORIFICE, RESTRICTION		OPEN
P	PRESSURE		TEST CONNECTION	PNEUMATIC	
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH, SOLENOID	STOP
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS, VACUUM			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES	
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED CONTROL ELEMENT	

GENERAL NOTES:

1. WATER FLOW METERS: INSTALL AS PER MANUFACTURES' RECOMMENDATIONS. ENSURE THAT THROTTLING VALVES ARE NOT IN DIRECT LINE OF THE METER.

2. PITOT AIR FLOW METERS: PROVIDE 8 DIA. OF STRAIGHT PIPE BEFORE AND 3 DIA. OF STRAIGHT PIPE AFTER METERS. AVOID TEES AND ELBOWS BEFORE AND AFTER METERS.

3. MATERIALS OF VALVES AND PIPING IS TO BE AS SPECIFIED ON THE DIAGRAM.

4. THERE ARE NO SPECIAL PIPING REQUIREMENTS OUTSIDE OF NEWTERRA'S STANDARDS UNLESS SPECIFIED ON THE DIAGRAM.

5. FLEXIBLE HOSE IS TO BE AS SPECIFIED ON THE DIAGRAM. IF A FLEXIBLE CONNECTION IS PREFERRED PLEASE CONSULT ENGINEERING TO ENSURE SELECTED HOSE IS RATED FOR THE OPERATING CONDITIONS.

6. DO NOT USE PVC PIPE ON AIR LINES OVER 5 PSIG.

7. ALL FEMALE PVC THREADED ADAPTORS MUST BE RE-ENFORCED FEMALE ADAPTORS.

8. NO DISSIMILAR METALS ARE TO BE IN DIRECT CONTACT ON WATER LINES. FOLLOW ENG.SOP.010

9. ALL PVC MUST BE SCHEDULE 80

10. ALL STAINLESS STEEL THREADED CONNECTIONS ARE TO UTILIZE GRAY TEFLON TAPE DESIGNED FOR SS FITTINGS.

11. ALL MECHANICAL BALL FLOAT LEVEL SWITCHES ARE TO BE INSTALLED WITH THEIR CABLES TIE WRAPPED, CABLES ARE NOT TO BE SHORTENED.

INDICATING INSTRUMENT

DIGITAL INPUT TO CONTROL PANEL

DIGITAL INPUT CAUSING ALARM

DIGITAL INPUT CAUSING SYSTEM SHUTDOWN ALARM

ANALOG INPUT TO CONTROL PANEL

ANALOG OUTPUT FROM CONTROL PANEL

38169

10/12/23

REV. No:

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AquaWorks DBO INC

DESIGN BUILD OPERATE

PROJECT: WWTP IMPROVEMENT PROJECT

COMMUNITY OF PHIPPSBURG

ROUTT COUNTY, COLORADO

ENGINEER: AQUAWORKS DBO, INC.

3252 WILLIAMS STREET

DENVER, COLORADO 80205

(303) 477-5915

SHEET TITLE:

P&ID LEGEND

PROJECT NUMBER:

#2479

SCALE:

NTS

SHEET:

P10

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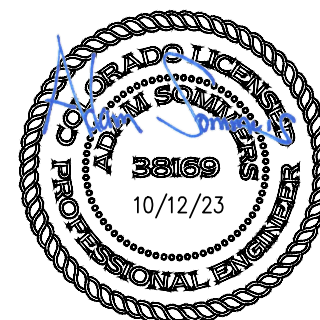
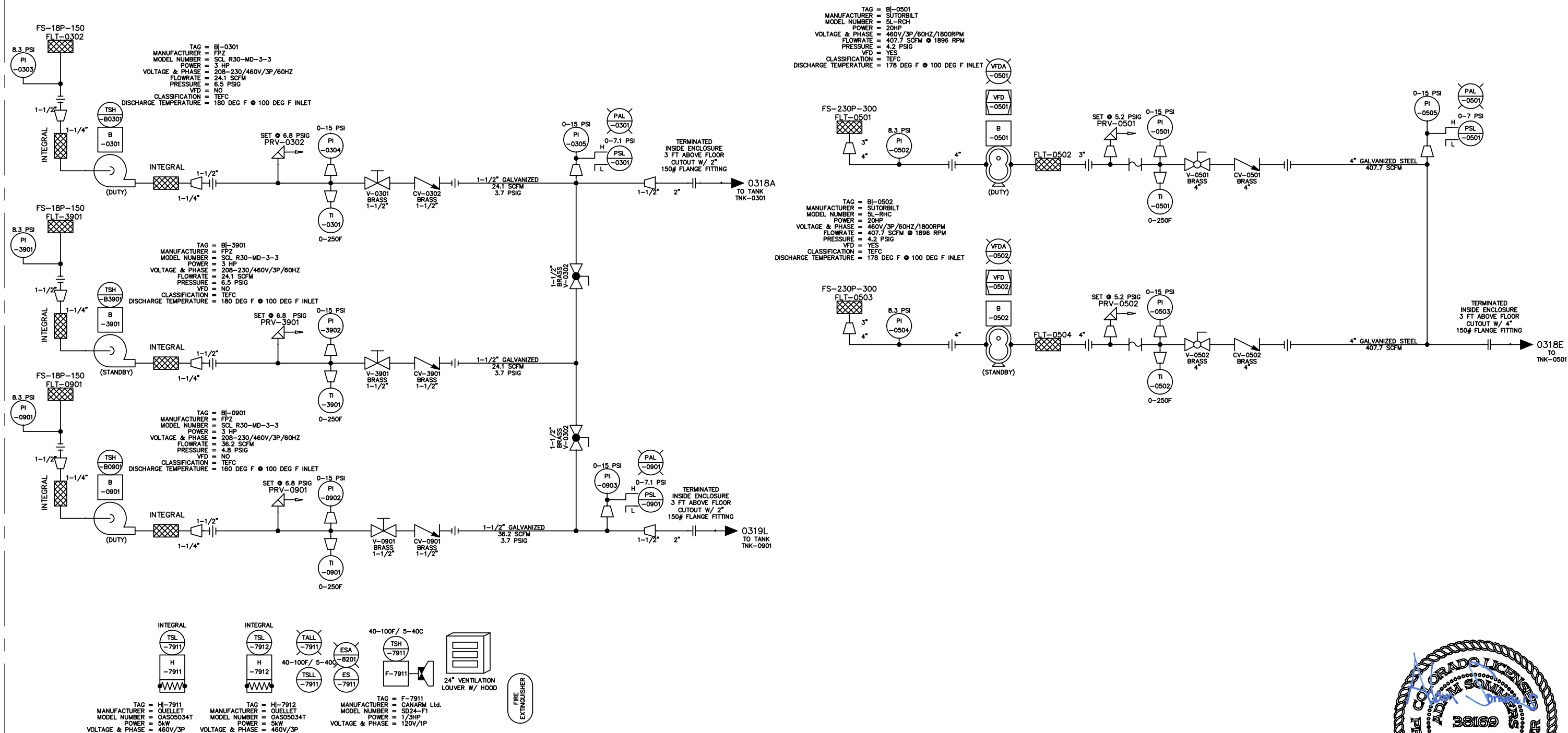
Reviewed for Code Compliance


05/13/2024

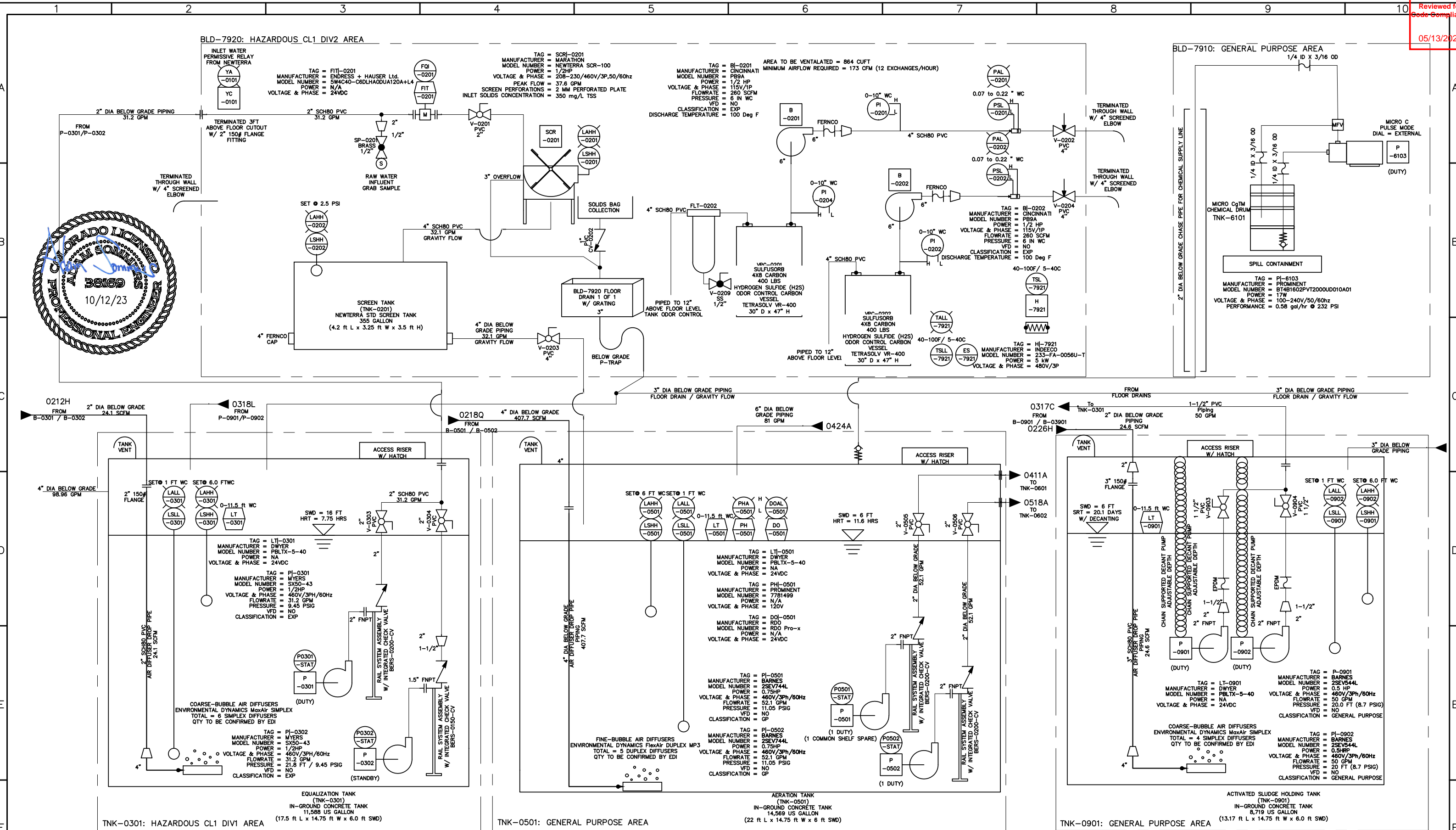


## BLD-7910: GENERAL PURPOSE AREA

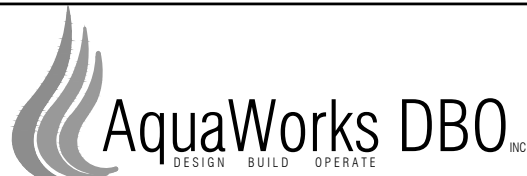
WWTP DESIGN PARAMETERS  
 AVERAGE DAILY FLOW (ADF) = 8.6 GPM  
 MAXIMUM DAILY FLOW (MDF) = 31.25 GPM  
 MAXIMUM MONTHLY FLOW (MMF) = 20.83 GPM  
 PEAK INSTANTANEOUS FLOW (PIF) = 52 GPM  
 SYSTEM AREA CLASSIFICATION = NFPA 820, 2016 EDITION, AS INTERPRETED



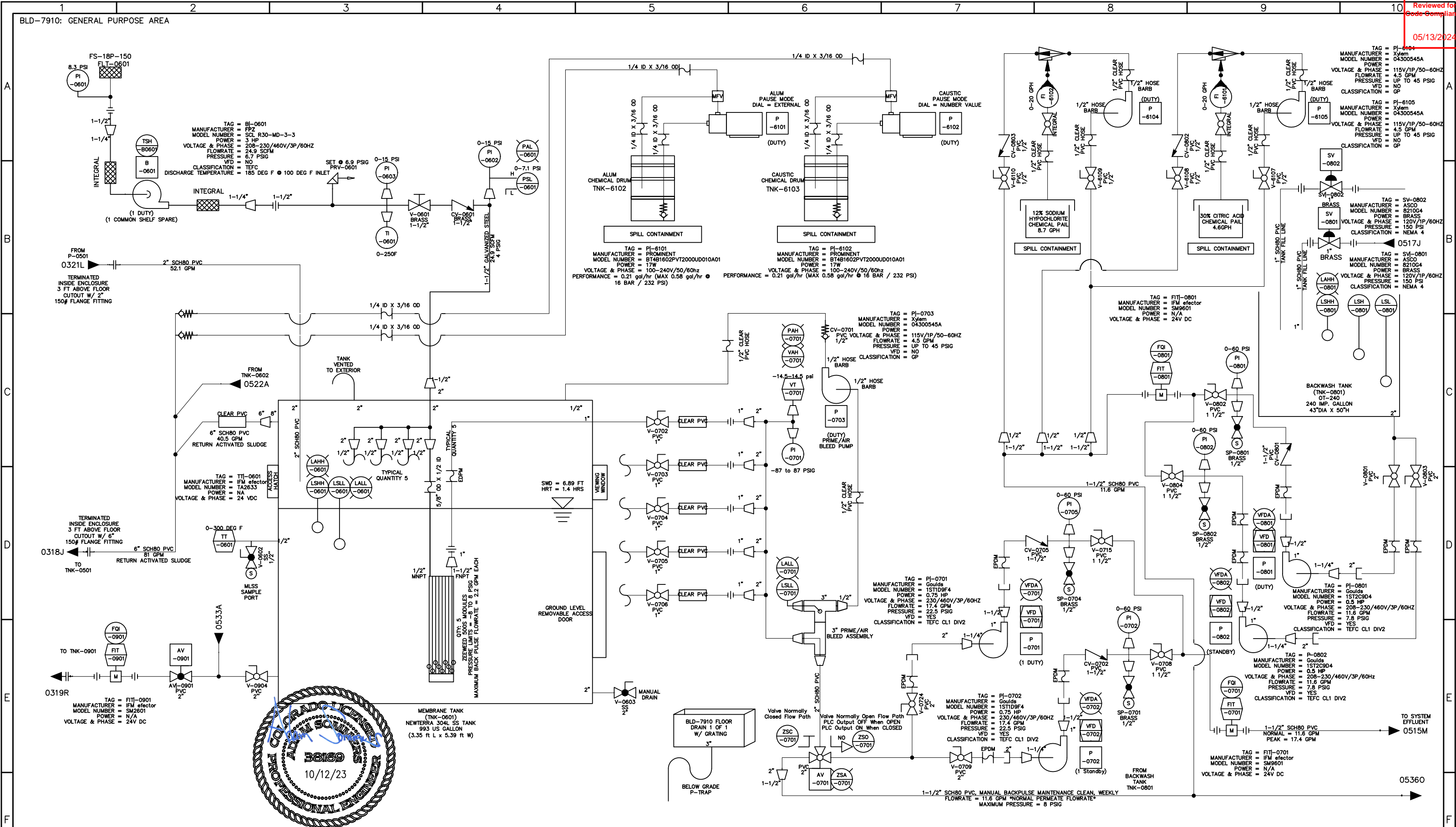
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				DESIGNED BY: AS		ENGINEER: AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915	PROJECT NUMBER:  #2479	SCALE:  1" = 20'	SHEET:  P11
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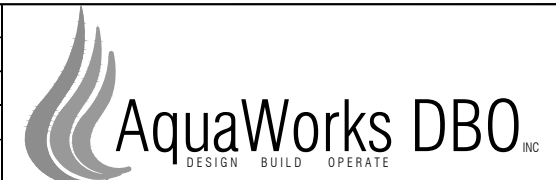
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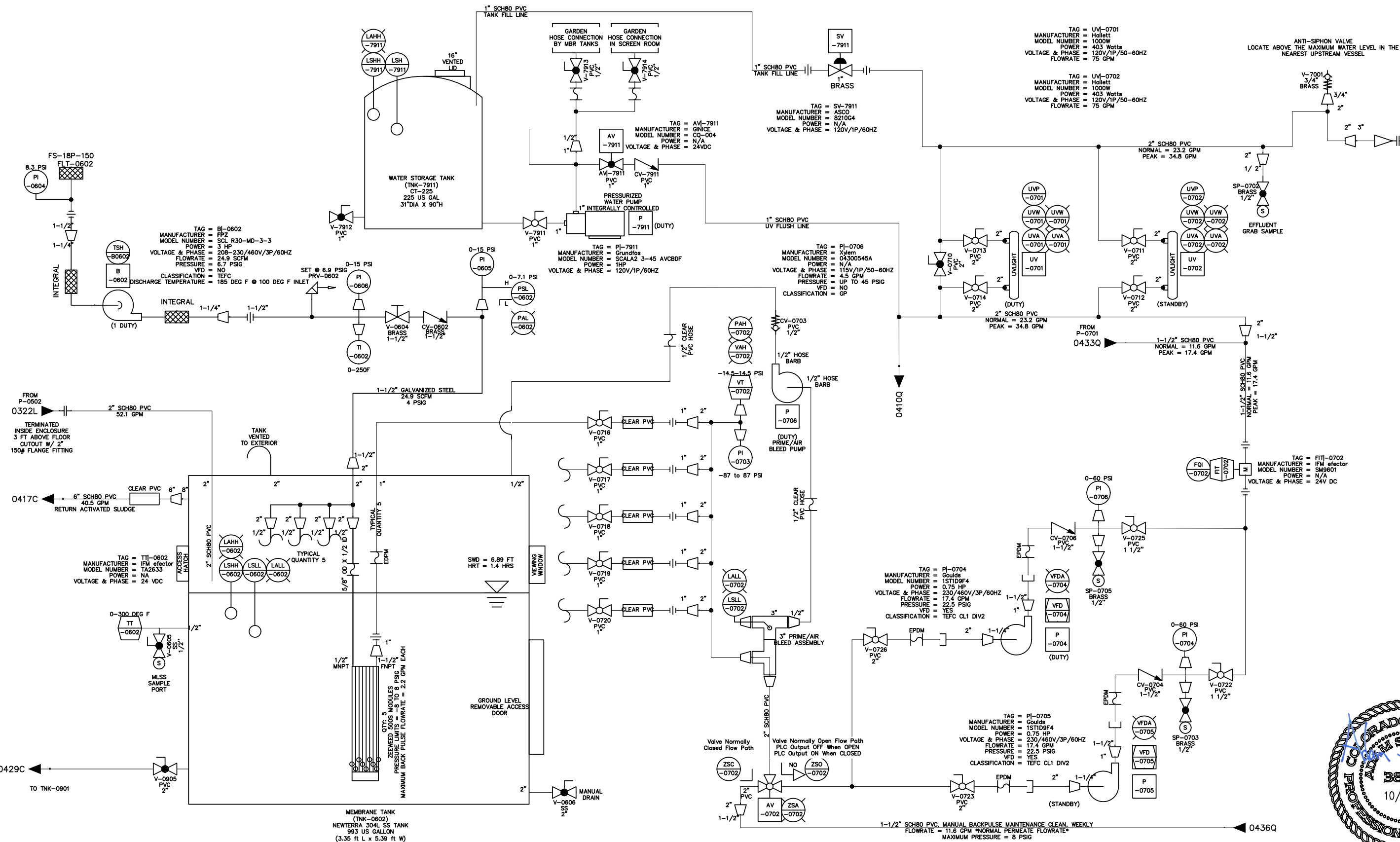





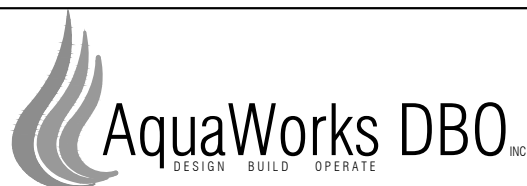


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					DESIGNED BY: AS		COMMUNITY OF PHIPPSBURG		P&ID 3	
					FILE PRINTED ON: 10/12/2023 4:03:20 PM		ROUTT COUNTY, COLORADO			
					COPYRIGHT: AQUAWORKS DBO, INC.		ENGINEER: AQUAWORKS DBO, INC.		PROJECT NUMBER:	
					0		3252 WILLIAMS STREET		SCALE:	
					1 IF THIS BAR DOES NOT READ 1"		DENVER, COLORADO 80205		1" = 20'	
					DRAWING IS NOT LABELED TO SCALE		(303) 477-5915		SHEET:	
									P13	





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ENGINEER:	AQUAWORKS DBO, INC. 3252 WILLIAMS STREET DENVER, COLORADO 80205 (303) 477-5915

SHEET TITLE: P&ID 4		
PROJECT NUMBER: #2479	SCALE: 1" = 20'	SHEET: P14

