WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION

980 CAMERON MILL RD, LAGRANGE, GEORGIA 30240

LAGRANGE
GEORGIA

BARGE
DESIGN SOLUTIONS

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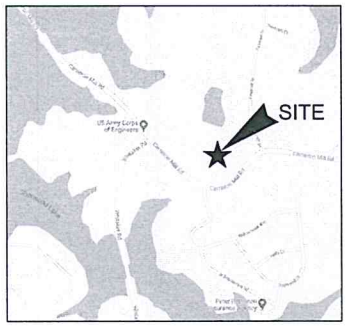
MAY 2022
OWNER AND AGENCY REVIEW



LOCATION MAP
NOT TO SCALE

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1 INCH

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MAY 2022
PROJECT NO.
36432-11

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

PROJECT NO. 36432-11

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PIPING LABELING AND COATING SCHEDULE

PIPING SYSTEM	LABEL	COATING COLOR
DRAIN/WASTE	DRAIN	LIGHT BROWN
BACKWASH/WASH	BACKWASH	BLUE
REWASH	REWASH	LIGHT GREEN
SURFACE SWEEP	SURFACE SWEEPS	DARK BLUE
INFLUENT	SETTLED	LIGHT LIGHT BLUE
EFFLUENT	FILTERED	LIGHT BLUE

VALVE SCHEDULE

TAG NUMBER	NUMBER	DESCRIPTION	TYPE	SERVICE	NOMINAL SIZE (IN.)	OPERATOR	POSITION
1949 Building							
FV-4911/21/31/41	4	BUTTERFLY VALVE, FLANGED	Type V500	SETTLED (FILTER INFLUENT)	16	ELECTRIC	OPEN/CLOSE
FCV-4912/22/32/42	4	BUTTERFLY VALVE, FLANGED	Type V500	FILTERED (FILTER EFFLUENT)	8	ELECTRIC	MODULATING
FV-4912/23/33/43	4	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	18	ELECTRIC	OPEN/CLOSE
FV-4914/24/34/44	4	BUTTERFLY VALVE, FLANGED	Type V500	DRAIN (WASTE)	18	ELECTRIC	OPEN/CLOSE
FV-4915/25/35/45	4	BUTTERFLY VALVE, FLANGED	Type V500	REWASH (WASTE)	4	ELECTRIC	OPEN/CLOSE
FV-4916/26/36/46	4	BUTTERFLY VALVE, FLANGED	Type V500	SURFACE SWEEP	4	ELECTRIC	OPEN/CLOSE
1969 Building							
FV-6951/61/71/81	4	BUTTERFLY VALVE, FLANGED	Type V500	SETTLED (FILTER INFLUENT)	20	ELECTRIC	OPEN/CLOSE
FCV-6952/62/72/82	4	BUTTERFLY VALVE, FLANGED	Type V500	FILTERED (FILTER EFFLUENT)	12	ELECTRIC	MODULATING
FV-6953/63/73/83, FV-6953A/63A/73A/83A & FV-6953B/63B/73B/83B	12	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	16	ELECTRIC	OPEN/CLOSE
FV-6954/64/74/84	4	BUTTERFLY VALVE, FLANGED	Type V500	DRAIN (WASTE)	20	ELECTRIC	OPEN/CLOSE
FV-6955/65/75/85	4	BUTTERFLY VALVE, FLANGED	Type V500	REWASH (WASTE)	6	ELECTRIC	OPEN/CLOSE
FV-6956A/66A/76A/86A & FV-6956B/66B/76B/86B	8	BUTTERFLY VALVE, FLANGED	Type V500	SURFACE SWEEP	8	ELECTRIC	OPEN/CLOSE
FCV-6900	1	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	20	(ELECTRIC - EXISTING)	MODULATING
FV-6900	1	PLUG VALVE, FLANGED	Type V201	BACKWASH (WASH)	12	MANUAL	OPEN/CLOSE
FV-6902	1	PLUG VALVE, FLANGED	Type V201	SURFACE SWEEP	6	MANUAL	OPEN/CLOSE

VENTURI SCHEDULE

NUMBER	DESCRIPTION	TYPE	PIPE SERVICE	NOMINAL SIZE (IN.)
1949 Building				
4	VENTURI	VENTURI	FILTERED (FILTER EFFLUENT)	8
1969 Building				
4	VENTURI	VENTURI	FILTERED (FILTER EFFLUENT)	12

INSTRUMENTATION LIST

TAG NUMBER	NUMBER	DESCRIPTION	TYPE
AE-4910/20/30/40/45/06 & AE-69-50/60/70/80 & AE-92-09/10/11/12/13/14	16	HACH TURBIDIMETER	TU5300SC
AIT-4910/30/45 & AIT-69-50/70 & AIT-92-09/11/13	8	HACH CONTROLLER	SC4500

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GENERAL INFORMATION

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION INFORMATION			
REV.	DR.	CHK.	DATE	DESCRIPTION
A	MS	MA	04/01/2022	90% Submittal
B	AO	MA	05/02/2022	OWNER AND ARCHITECT REVIEW

00-G001

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VALVE DESIGNATIONS

SYMBOLS: DOUBLE LINE	SYMBOLS: SINGLE LINE	TYPE
		FOOT VALVE
		VACUUM RELIEF VALVE
		PRESSURE RELEASE VALVE
		HOSE BIBB
		GATE VALVE
		ALTITUDE VALVE, PRESSURE CONTROL, REGULATING VALVE, SURGE OR PRESSURE RELIEF
		BUTTERFLY VALVE
		BALL CONTROL VALVE
		BALL VALVE
		DIAPHRAGM VALVE
		FLOODWATER (DUCKBILL) VALVE
		CHECK VALVE
		WAFER CHECK VALVE
		CONE VALVE
		GLOBE VALVE
		PLUG VALVE
SECTION / PLAN		MUD VALVE
		PINCH VALVE
		TAPPING SLEEVE AND VALVE
VERTICAL AXIS		TELESCOPIC VALVE

SYMBOL LEGEND

DOUBLE LINE	SINGLE LINE	
		90° FLANGE BEND
		FLANGE TEE
		REDUCER CONCENTRIC
	M	FLOW METER
		FLEXIBLE CONNECTION
	PI	PRESSURE INDICATOR
	S	SOLENOID OPERATED
	M	MOTOR OPERATED
		QUICK CONNECT COUPLING

JOINT DESIGNATIONS

SYMBOL	TYPE
	FLANGED JOINT
	MECHANICAL JOINT
	THREADED JOINT
	PUSH ON JOINT
	BOLTED FLEXIBLE COUPLING
	GROOVED COUPLING
	SHOP WELDED JOINT (STEEL PIPE)
	FIELD WELDED JOINT (STEEL PIPE)
	SOCKET TYPE JOINT (FRP OR PVC PIPE)
	EXPANSION JOINT
	FLANGE ADAPTER COUPLING
	BLIND FLANGE
	DISMANTLING JOINT
	RESTRAINED FLANGE ADAPTOR

PIPE DESIGNATIONS

SYMBOL	TYPE
	CORED HOLE IN EXISTING WALL
	WALL SLEEVE W/ WATER COLLAR (STANDARD)
	FLANGE X FLANGE WALL PIPE
	FLANGE X PLAIN END WALL PIPE
	FLANGE X PLAIN END WALL PIPE (TAPPED FOR STUDS)
	MECHANICAL JOINT X MECHANICAL JOINT WALL PIPE (TAPPED FOR STUDS)
	MECHANICAL JOINT X PLAIN END WALL PIPE (TAPPED FOR STUDS)
	PUSH ON BELL JOINT X PLAIN END WALL PIPE

PIPING AND VALVES GENERAL NOTES

1. INSTALL ALL PIPING SUPPORTS AND PIPING IN ACCORDANCE WITH THE LATEST EDITION OF THE ASME ANSI POWER PIPING CODE B 31.1.
2. LOCATE PRESSURE TAPS ON THE TOP OF PROCESS PIPES, UNLESS OTHERWISE INDICATED ON DWGS.
3. LOCATE SAMPLE TAPS ON THE SIDE OF PROCESS PIPES.
4. LOCATE DRAIN TAPS ON THE BOTTOM OF PROCESS PIPES.
5. UNLESS OTHERWISE NOTED, PIPE ELEVATIONS SHOWN ON PIPING DRAWINGS REFER TO CENTERLINE OF THE PIPE.
6. ALL GROUND BURIED PIPING TO HAVE A MINIMUM OF 36" OF EARTH COVER OR AS DETAILED ON THE DRAWINGS. MAINTAIN MINIMUM CLEARANCE BETWEEN PIPES OF 6".
7. INSTALL ALL PLUG, BUTTERFLY AND BALL VALVES WITH THE SHAFT IN THE HORIZONTAL POSITION, UNLESS OTHERWISE DIRECTED.

SITE PLAN LEGEND

	NEW BUILDING
	EXISTING BUILDING
	NEW STRUCTURE (TANKS, ETC.)
	EXISTING STRUCTURE (TANKS, ETC.)
	FUTURE STRUCTURE
	NEW PIPING SINGLE LINE
	NEW PIPING DOUBLE LINE
	EXISTING PIPING SINGLE LINE
	EXISTING PIPING DOUBLE LINE
	NEW MANHOLE
	EXISTING MANHOLE
	NEW VALVE BOX
	EXISTING VALVE BOX
A-1-2 MH	NEW VALVE MANHOLE AND NUMBER
MH	EXISTING VALVE MANHOLE
YH	NEW YARD HYDRANT ASSEMBLY
	NEW FIRE HYDRANT ASSEMBLY
	EXISTING FIRE HYDRANT ASSEMBLY
	NEW UNDERGROUND ELECTRICAL CONDUIT
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
	NEW CATCH BASIN
	EXISTING CATCH BASIN
	PIPING OR EQUIPMENT TO BE DEMOLISHED
	STRUCTURE (TANKS, ETC.) OR PAVEMENT TO BE REMOVED
	STRUCTURE/ BUILDING TO BE RENOVATED
	ABANDON PIPE
	NEW CONCRETE PAVEMENT
	EXISTING CONCRETE PAVEMENT
	NEW ASPHALT PAVEMENT
	EXISTING ASPHALT PAVEMENT
	NEW GRAVEL DRIVE
	EXISTING GRAVEL DRIVE
	STRAW BALES
	RIP-RAP
1894	NEW CONTOURS
1894	EXISTING CONTOURS
	NEW FENCE
	EXISTING FENCE
	PROPERTY LINE
	NEW POWER POLE
	EXISTING POWER POLE
00	STRUCTURE IDENTIFIER
S S S	SILT FENCE
	EASEMENT BOUNDARY

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GENERAL LEGEND

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	MJS	MA	MAY 2021	30% REVIEW SUBMITTAL
B	JCC	MA	DEC 2021	100% REVIEW SUBMITTAL

00-G002

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GENERAL NOTES

1. NOT ALL OFFSETS AND FITTINGS ARE SHOWN. PROVIDE OFFSETS AND FITTINGS AS REQUIRED BY FIELD CONDITIONS AS PART OF THE WORK.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON PLANS, BUT NOT INCLUDED ON THE BID. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE LUMP SUM BID ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR IS ISSUED A COMPLETE SET OF CONTRACT DRAWINGS WHILE EVERY EFFORT HAS BEEN MADE TO CONCENTRATE THE WORK OF TRADES ON SPECIFIC SHEETS AND LABELED ACCORDINGLY, THERE ARE NECESSARY INSTANCES WHERE WORK IS SHOWN ON, OR CROSS-REFERENCED TO, OTHER DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND COORDINATE THE WORK.
4. THE EXISTENCE AND LOCATION OF SITE IMPROVEMENTS, UTILITIES, MECHANICAL SYSTEMS, ELECTRICAL SYSTEMS, AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK.
5. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS.
6. THE CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS, REESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED SURVEYOR IN THE STATE OF GEORGIA AT NO ADDITIONAL COST TO OWNER.
7. INFORMATION REGARDING EXISTING CONDITIONS AND FACILITIES ARE DERIVED FROM PREVIOUS CONTRACT DRAWINGS OBTAINED FROM CITY OF LA GRANGE. THERE MAY BE OTHERS. THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.
8. LEGEND REPRESENTS STANDARD LINE TYPES AND HATCHING UNLESS INDICATED ON SPECIFIC DRAWINGS.
9. THE CONTRACTOR IS TO COORDINATE STAGING AREAS WITH OWNER.
10. WHILE EVERY EFFORT HAS BEEN MADE TO IDENTIFY THE ITEMS TO BE DEMOLISHED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SCOPE OF WORK IN THE FIELD, REVIEW THESE CONTRACT DRAWINGS, ALL PREVIOUS PLANT CONSTRUCTION DRAWINGS & DOCUMENTS AND THE DEMOLITION SPECIFICATIONS, AND THE EXISTING FACILITY PLANS, AND DEMOLISH ALL ITEMS NECESSARY TO ACCOMMODATE THE PROPOSED WORK. ALSO THE CONTRACTOR SHALL REPAIR ALL SURFACES AND PLUG ABANDONED PENETRATIONS UPON REMOVAL OF THE DEMOLISHED ITEMS PER THE SPECIFICATION.
11. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND EXAMINE LOCAL CONDITIONS TO BE ENCOUNTERED, IMPROVEMENTS TO BE PROTECTED, PERMITS AND FEES REQUIRED, AND OTHER RESEARCH NECESSARY TO ASSURE THAT THE PROJECT IS THOROUGHLY UNDERSTOOD AND IS FULLY AWARE OF ALL CONDITIONS AND CONSTRAINTS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION.
12. NO SPOILS OR EQUIPMENT STORAGE IS ALLOWED WITHIN THE 100-YEAR FLOOD PLAIN.
13. THE CONTRACTOR'S OPERATIONS SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATION AND TRENCHING.
14. LEGEND SYMBOLS MAY VARY BY DISCIPLINE. LEGENDS ARE SHOWN ON THE DISCIPLINE NOTES AND LEGEND SHEETS.
15. THE CONTRACTOR IS RESPONSIBLE TO REPLACE SOD, IRRIGATION, AND LANDSCAPING WHICH HAS BEEN REMOVED OR DAMAGED DUE TO CONSTRUCTION PRACTICES TO EXISTING OR BETTER CONDITION.
16. THE CONTRACTOR SHALL PROVIDE FITTINGS, PLUGS, AND OTHER SERVICES REQUIRED FOR FILLING, FLUSHING, TESTING, ETC. NO SEPARATE PAY ITEM.
17. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH A SIGNED SET OF PLANS WITH ALL THE FINAL MEASUREMENTS AND AS BUILT INFORMATION FOR PREPARATION OF RECORD DOCUMENTS.
18. DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT WHICH MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED ON ANY WETLANDS, WATER BODY, OR STREAM BED. THE CONTRACTOR STAGING AREAS AND VEHICLE MAINTENANCE AND PARKING AREAS SHALL BE MAINTAINED IN A MANNER TO MINIMIZE POLLUTANT RUNOFF AND IN ACCORDANCE WITH CITY OF LA GRANGE REQUIREMENTS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ALL FENCES, CONCRETE ISLANDS, OR CONCRETE DRIVEWAYS IN THE WORK AREA TO THEIR ORIGINAL CONDITION PRIOR TO COMPLETION OF THE CONTRACT. THIS SHALL APPLY TO ALL OF THE MENTIONED ITEMS WHETHER THEY ARE SHOWN ON THE PLAN OR NOT. NO SEPARATE PAY ITEM.
20. DETOUR ROUTING AROUND WORK ACTIVITIES, MAINTENANCE OF DETOUR SIGNS, AND FLAGMEN ARE THE CONTRACTOR'S RESPONSIBILITY. NO SEPARATE PAYMENT WILL BE MADE.
21. THE CONTRACTOR IS RESPONSIBLE FOR SEQUENCING HIS WORK SO AS NOT TO DISRUPT PLANT OPERATIONS. CLOSE COORDINATION BETWEEN THE CONTRACTOR, ENGINEER, AND PLANT PERSONNEL IS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIALS, LABOR, ETC. FOR TEMPORARY CONNECTIONS DURING ALL REMOVAL AND REPLACEMENT CONDITIONS. ALL CONSTRUCTION & MATERIALS USED SHALL BE IN ACCORDANCE WITH CITY OF LA GRANGE STANDARDS, SPECIFICATIONS, AND RISK MANAGEMENT REQUIREMENTS. ALL MATERIALS TAKEN FOR DISPOSAL MUST BE DISPOSED OF AT A PERMITTED LANDFILL SITE. CONTRACTOR SHALL PROVIDE ENGINEER WITH THE HAULING MANIFESTS TO DOCUMENT PROPER DISPOSAL.
22. UNDERGROUND UTILITIES THAT ARE LESS THAN 4 INCHES IN DIAMETER SHALL BE SHORED IN PLACE OR RELOCATED AS REQUIRED TO COMPLETE THE WORK. THIS EFFORT SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE ACCOMPLISHED AT NO ADDITIONAL EXPENSE TO THE OWNER WHETHER THESE UTILITIES ARE SHOWN OR NOT SHOWN ON THE DRAWINGS.
23. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT, AND WORKMAN LIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED.
24. ALL OFFSETS ARE GIVEN TO THE LEFT OR RIGHT OF THE BASELINE WITH HIGHER STATIONS BEING FORWARD (UNLESS OTHERWISE NOTED).
25. "SCREENED" (LIGHT) DELINEATION INDICATED ON THE DRAWINGS DENOTES EXISTING FACILITIES. "SCREENED" INFORMATION WAS TAKEN FROM EXISTING CONSTRUCTION DRAWINGS AND DATA, IS FOR REFERENCE ONLY, AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE ORDERING OF MATERIALS AND BEGINNING OF CONSTRUCTION. "BOLD" DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
26. CONTRACTOR SHALL COMPLY WITH THE GOVERNING AGENCY NPDES CONSTRUCTION REQUIREMENTS, AND SHALL PROVIDE APPROPRIATE MITIGATION OR PROTECTION AND RESTORATION AT ALL LOCATIONS AS REQUIRED BY THEIR OPERATIONS, AND AS DIRECTED BY ENGINEER. SPECIAL CONSTRUCTION REQUIREMENTS, TEMPORARY PROTECTIVE FENCING OR BARRICADES, SHEETING, SHORING, EROSION PROTECTION, AND SURFACE RESTORATION AT CERTAIN LOCATIONS ARE INDICATED ON THE DRAWINGS TO BRING CONTRACTOR'S ATTENTION TO SENSITIVE AREAS.
27. LOCATION OF THE NEW INSTRUMENTATION IS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE FINAL INSTRUMENTATION LOCATION WITH THE ENGINEER.
28. THE CONTRACTOR IS TO VERIFY AND COORDINATE ALL EXISTING STRUCTURES, PIPING, ELEVATIONS, LOCATIONS, SIZE, AND TYPE OF MATERIAL WITH NEW PIPING PRIOR TO CONSTRUCTION. IF DISCREPANCIES ARISE BETWEEN THESE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITION, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IN WRITING.
29. THE CONTRACTOR IS TO PROVIDE ALL ADAPTERS FOR TRANSITIONS BETWEEN DIFFERENT PIPE MATERIALS.
30. CLEAN AND PROTECT CONSTRUCTION IN PROGRESS AND ADJOINING MATERIALS ALREADY IN PLACE. APPLY PROTECTIVE COVERING WHERE REQUIRED TO ENSURE PROTECTION FROM DAMAGE OR DETERIORATION. DAMAGED EQUIPMENT OR MATERIALS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED AT NO COST TO THE OWNER.

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GENERAL NOTES

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJS	MLA	MAY 2022	30% DESIGN SUBMITTAL
B	AJS	MLA	MAY 2022	60% DESIGN SUBMITTAL

REVISION HISTORY

00-G003

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ABBREVIATIONS

GENERAL ABBREVIATIONS

AB	ANCHOR BOLTS
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABS	ACRYLONITRILE BUTADIENE STYRENE
AC	ASBESTOS CEMENT
ACST	ACOUSTIC
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADPT	ADAPTER
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASPH	ASPHALT
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
BC	BACK OF CURB
BLDG	BUILDING
BKGD	BACKGROUND
BLT	BULT
BM	BENCHMARK
BM	BLOWOFF
BOT	BOTTOM
BTWN	BETWEEN
BYP	BY PASS
CAG	CURB AND GUTTER
CAP	CAPACITY
CAT	CATALOG
CB	CATCH BASIN
CCW	COUNTER CLOCKWISE
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHKR	CHECKER
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CL2	CHLORINE
CLG	CEILING
CLR	CLEAR
CM	CONCRETE MONUMENT
CMU	CONCRETE MASONRY UNIT
CNT	CONTAINMENT
CO	CLEAN OUT
COL	COLUMN
COM	COMMON
CONC	CONCRETE
CONC FLR	CONCRETE FLOOR
CONN	CONNECT
CONSTR	CONSTRUCT
CONT	CONTINUOUS
CP	CONTROL PANEL
CPLG	COUPLING
CTR	CENTER
CU	COPPER
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CU YD	CUBIC YARD
CW	CLOCKWISE
dB	DECIBEL
dBA	UNIT OF SOUND LEVEL
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DHW	DESIGN HIGH WATER
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISC	DISCONNECT
DISCH	DISCHARGE
DIST	DISTANCE
DN	DOWN
DW	DOUBLE WALL
DWG	DRAWING
E	EAST
EA	EACH
ECC	ECCENTRIC
ECC RDCR	ECCENTRIC REDUCER
ED	EQUIPMENT DRAIN
EF	EACH FACE
EFF	EFFLUENT
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
ELEC DR OP	ELECTRIC DOOR OPENER
EMER SHR	EMERGENCY SHOWER
ENCL	ENCLOSURE
EP	EDGE OF PAVEMENT (PAVING)
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
ET	ELAPSED TIME
EW	EACH WAY
EXP	EXPANSION
EXST	EXISTING
EXST GR	EXISTING GRADE
EXT	EXTERNAL
F	FAHRENHEIT
FB	FLAT BAR
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF EL	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FIG	FIGURE
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FLEX	FLEXIBLE
FLL	FLOW LINE
FLR	FLOOR
FN	FENCE
FRP	FIBER REINFORCED PLASTIC
FT	FEET
FT	FOOT
FTG	FOOTING
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GBT	GRAVITY BELT THICKENER
GEN	GENERAL
GL	GLASS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRTG	GRATING
GSKT	GASKET
H	HIGH
HB	HOSE BIBB
HGR	HANGER
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HIGH SERVICE
HT	HEIGHT
HWA	HIGH WATER ALARM
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRANT OR HYDRAULIC
Hz	HERTZ
ID	INSIDE DIAMETER
IN	INCH
IND	INDICATOR
INF	INFLUENT
INFO	INFORMATION
INSTR	INSTRUMENT
INSUL	INSULATION
INV	INVERT
INV EL	INVERT ELEVATION
IP	IRON PIN
IR	IRON ROD
JCT	JUNCTION
JT	JOINT
KWY	KEY WAY
L	ANGLE
LAB	LABORATORY
LAT	LATITUDE
LATL	LATERAL
LBS	POUND
LF	LINEAR FEET (FOOT)
LH	LEFT HAND
LIM SW	LIMIT SWITCH
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNG	LONGITUDE
LOC	LOCATION
LOG	LOGARITHM
LONG	LONGITUDINAL
LP	LIGHT POLE
LT	LIGHT
LVR	LOUVER
LW	LOW WATER
LWA	LOW WATER ALARM
LWL	LOW WATER LEVEL
M	METER
MACH	MACHINE
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MEAS	MEASURE
MECH	MECHANICAL
MED	MEDIUM
MFD	MANUFACTURED
MFG	MANUFACTURING
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAMS PER LITER
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MOT	MOTOR
MSL	MEAN SEA LEVEL
MTD	MOUNTED
MTL	METAL
N	NORTH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
NUM	NUMERAL
OA	OVERALL
OC	ON CENTER
OC EW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
O E	OR EQUAL
OH	OVERHEAD
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORIG	ORIGINAL
OVFL	OVERFLOW
PC	POINT OF CURVE
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
pH	ACID/ALKALINE SCALE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PROPERTY LINE OR PLATE
PLAT	PLATFORM
POS	POSITIVE
PPM	PARTS PER MILLION
PR	PAIR
PRESS	PRESSURE
PREV	PREVIOUS
PRI	PRIMARY
PRKG	PARKING
PS	PIPE SUPPORT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAUGE
PSL	PIPE SLEEVE
PT	POINT OF TANGENCY
PVG	PAVING
PWR	POWER
Q	RATE OF FLOW
QTR	QUARTER
QTY	QUANTITY
R	RADIUS
RD	ROAD
RECD	RECEIVED
REGM	RECOMMENDATION
RED	REDUCER
REF	REFRIGERATOR OR REFERENCE
REINF	REINFORCE
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REQD	REQUIRED
RESIL	RESILIENT
RM	ROOM
RND	ROUND
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RR	RAILROAD
S	SOUTH
S/S	START/STOP
SALV	SALVAGE
SAN	SANITARY
SCFM	STANDARD CUBIC FEET PER MINUTE
SCHED	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SECT	SECTION
SED	SEDIMENTATION
SEG	SEGMENT
SF	SQUARE FOOT (FEET)
SGL	SINGLE
SHLDR	SHOULDER
SHV	SHELVING
SIM	SIMILAR
SL	SLUDGE
SLDR	SOLDER
SLNT	SEALANT
SLV	SLEEVE
SOLN	SOLUTION
SOLV	SOLENOID VALVE
SPEC	SPECIFICATION
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STIF	STIFFENER
STK	STOCK
STRUCT	STRUCTURAL
SWD	SIDE WATER DEPTH
SWR	SEWER
SYM	SYMBOL
SYMM	SYMMETRICAL
T	TREAD
T&B	TOP AND BOTTOM
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE
TEMP	TEMPORARY
THK	THICKNESS
TOB	TOP OF BERM
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UGND	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UV	ULTRAVIOLET
V	VENT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARIES
VB	VACUUM BREAKER
VB	VALVE BOX
VERT	VERTICAL
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WEST
W/	WITH
W/O	WITHOUT
WAS	WASTE ACTIVATED SLUDGE
WD	WOOD
WHTR	WATER HEATER
WL	WATER LINE
WLD	WELDED
WM	WATER METER
WSFT	WATER SOFTENER
WT	WATER TABLE
WW	WASTE WATER
XFER	TRANSFER
XFMR	TRANSFORMER
YD	YARD DRAIN
YH	YARD HYDRANT
YI	YARD INLET
YR	YEAR

PIPE MATERIALS

ABS	ACRYLONITRILE BUTADIENE STYRENE PIPE
ACP	ASBESTOS CEMENT PIPE
BSP	BLACK STEEL PIPE
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CPP	CONCRETE PRESSURE PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE PIPE
CU P	COPPER PIPE/TUBING
DIP	DUCTILE IRON PIPE
FT	FLEXIBLE TUBING
FRP	FIBERGLASS REINFORCED PLASTIC PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PE	POLYETHYLENE (PLASTIC) PIPE
PVC	POLYVINYL CHLORIDE (PLASTIC) PIPE
PVF	POLYVINYL FLUORIDE (PLASTIC) PIPE
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RCP	REINFORCED CONCRETE PIPE
SSTL	STAINLESS STEEL PIPE
STL	STEEL PIPE
VCP	VITRIFIED CLAY PIPE

VALVES AND JOINTS

AC CHKV	AIR CUSHION CHECK VALVE
ARV	AIR RELEASE VALVE
B CHKV	BALL CHECK VALVE
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BO	BURIED GEAR OPERATOR
BV	BALL VALVE
C	COMPRESSION JOINT
C CHKV	CUSHION CHECK VALVE
CHKV	CHECK VALVE
CV	CHECK VALVE
DC	DOUBLE CONTAINED PIPE
DMJ	DISMANTLING JOINT
EJ	EXPANSION JOINT
EL VA	ELECTRIC VALVE ACTUATOR
FAC	FLANGED ADAPTER COUPLING
FH	FIRE HYDRANT
FLG	FLANGED
GR	GROOVED END
GTV	GATE VALVE
HU	HUB AND SPIGOT
K GTV	KNIFE GATE VALVE
LR	LONG RADIUS
MJ	MECHANICAL JOINT
NV	NEEDLE VALVE
OC CHKV	OIL CUSHIONED CHECK VALVE
P CHKV	PRESSURE CHECK VALVE
PE	PLAIN END
PHV	PINCH VALVE
PNEU VA	PNEUMATIC VALVE ACTUATOR
PO	PUSH ON JOINT
PRV	PRESSURE REGULATING VALVE
PV	PLUG VALVE
RJ	RESTRAINED JOINT
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RS GTV	RESILIENT SEAT GATE VALVE
S	SOLDERED JOINT
SAV	SURGE ANTICIPATOR VALVE
SOLV	SOLENOID VALVE
SW	SOLVENT WELDED
THD	THREADED
TS&V	TAPPING SLEEVE AND VALVE
W	WELDED
WSLV	WALL SLEEVE

PROCESS FLUIDS

ACS	CARBON SLURRY
AER	AERATION
AHP	HIGH PRESSURE AIR
ALP	LOW PRESSURE AIR
ALUM	ALUM
ANE	ANAEROBIC EFFLUENT
ANI	ANAEROBIC INFLUENT
ARCY	ANOXIC RECYCLE
ARE	AERATION EFFLUENT
ARI	AERATION INFLUENT
ASH	INCINERATOR ASH
ASR	AERATED SUPERNATANT RETURN
AWR	ACID WASH RETURN
AWS	ACID WASH SUPPLY
AXE	ANOXIC EFFLUENT
AXI	ANOXIC INFLUENT
BISULFITE	SODIUM BISULFITE
BISULFITE SOL	SODIUM BISULFITE SOLUTION
BW	BACKWASH
BWW	BACKWASH WASTE
CCK	CENTRIFUGE BIOSOLIDS CAKE
CEN	CENTRATE
CFS	CENTRIFUGE FEED SOLIDS
CIP	CLEAN-IN PIPE
CL2	CHLORINE GAS
CLO2	CHLORINE DIOXIDE
CLS	CHLORINE SOLUTION
CN SCUM	CONCENTRATED SCUM
CNFS	CONDITIONING TANK FEED SOLIDS
CON	CONCENTRATE
CONH	CORROSION INHIBITOR
CRW	CLARIFIED RAW WATER
CS	CONDITIONED SLUDGE
CTE	DISINFECTION CONTACT TANK EFFLUENT
CTS	CENTRIFUGE THICKENED BIOSOLIDS
CW	COLD WATER (POTABLE)
CYCL INF	CYCLONE INFLUENT
CYCL RCY	CYCLONE RECYCLE
D AL	DISSOLVED ALUM
DA	POLYMER DRY AIR
DEC	DECANT
DF	DIESEL FUEL
DFR	DIESEL FUEL RETURN
DFS	DIESEL FUEL SUPPLY
DGAS	DIGESTER GAS
DGR	DEWATERED GRIT
DPOLY	DRY POLYMER
DPSD	DRAINAGE PUMP STATION DISCHARGE
DRN	DRAIN
DRS	DIGESTER RECIRCULATION SOLIDS
DS	DIGESTED SLUDGE
DSR	DECANT SUPERNATANT RETURN
DW FL	DEWATERING FLOCCULATION
DWS	DEWATERED SLUDGE
EI	EQUALIZATION INFLUENT
ER	EQUALIZATION RETURN
F	FILTRATE
FD	FLOOR DRAIN
FD SCUM	FEED SCUM
FE	FINAL EFFLUENT
FECL	FERRIC CHLORIDE
FES	FERROUS SULFATE
FIRE	FIRE PROTECTION
FL	HYDROFLUOROSILICIC ACID
FLS	FOREIGN BIOSOLIDS LOADING
FLW	FILTERED WATER
FO	FUEL OIL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FSB	FLOTATION THICKENER SUBNATANT
FTFS	FLOTATION THICKENER FEED SOLIDS
FTRCY	FLOTATION THICKENER RECYCLE
FTS	FLOTATION THICKENED SOLIDS
FUS	FOREIGN BIOSOLIDS UNLOADING
GBFL	GRAVITY BELT THICKENER FILTRATE
GBFS	GRAVITY BELT THICKENER FEED SOLIDS
GBTS	GRAVITY BELT THICKENED SOLIDS
GRIT	GRIT
GSP	GRAVITY THICKENER OVERFLOW/SUPERNATANT
GTFS	GRAVITY THICKENER FEED SOLIDS
GTS	GRAVITY THICKENED SOLIDS
H2O2	PEROXIDE
HCL	HYDROCHLORIC ACID
HDO	HYDRAULIC OIL
HPSA	SERVICE AIR (HIGH PRESSURE)
HPW	HOT POTABLE WATER
HTFS	HOLDING TANK FEED SOLIDS
HVAC	HVAC
HW	HOT WATER (POTABLE)
HW REV RET	HOT WATER REVERSE RETURN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HYPO	SODIUM HYPOCHLORITE
HYPO SOL	SODIUM HYPOCHLORITE SOLUTION
ICE	INTERMEDIATE CLARIFIER EFFLUENT
ICI	INTERMEDIATE CLARIFIER INFLUENT
IFC	INCINERATOR FEED CAKE
INS	INTERMEDIATE BIOSOLIDS
ISE	INCINERATOR SCRUBBER WATER EFFLUENT
LO	LUBE OIL
LP	PROPANE
LPOLY	LIQUID POLYMER
LPSA	SERVICE AIR (LOW PRESSURE)
LS	LIME SLURRY
MIT	MEMBRANE INTEGRITY TEST AIR
ML	MIXED LIQUOR
NAOCL	SODIUM HYPOCHLORITE
NAOH	CAUSTIC
NAOH SOL	CAUSTIC SOLUTION
NAT GAS	NATURAL GAS
NG	NATURAL GAS
NH4	AMMONIA
NPW	NON POTABLE WATER
NPWW	NOT POTABLE WELL WATER
NRCY	NITRIFIED RECYCLE
O3	OZONE
OA	ODOROUS AIR
OTE	OXIDATION TOWER EFFLUENT
OTI	OXIDATION TOWER INFLUENT
PA	PROCESS AIR
PACL	POLYALUMINUM CHLORIDE
PCE	PRIMARY CLARIFIER EFFLUENT
PCI	PRIMARY CLARIFIER INFLUENT
PCS	PRIMARY CLARIFIER SOLIDS
PERM	PERMEATE
PDFS	PRIMARY DIGESTER FEED SOLIDS
PDS	PRIMARY DIGESTED SOLIDS
PDSP	PRIMARY DIGESTER SUPERNATANT
PDXS	PRIMARY DIGESTER TRANSFER SOLIDS
PO4	PHOSPHATE COMPOUNDS
PP	POTASSIUM PERMANGANATE
PW	POTABLE WATER
PY	POLYMER SOLUTION
RAS	RETURN ACTIVATED SLUDGE
RCYW	RECYCLE WATER
RD	ROOF DRAIN
REJ	REJECT
RW	RAW WATER
RWW	RAW WASTEWATER INFLUENT
SAMP	SAMPLE
SBD	SCRUBBER BLOWDOWN
SCB	SCUM CONCENTRATOR SUBNATANT
SCE	SECONDARY CLARIFIER EFFLUENT
SCF	SCRUBBER CHEMICAL FEED
SCI	SECONDARY CLARIFIER INFLUENT
SCRUB EXH	SCRUBBER EXHAUST
SCRUB INTK	SCRUBBER INTAKE
SCUM	SCUM
SD	STORM DRAIN
SDS	SECONDARY DIGESTED SOLIDS
SDSP	SECONDARY DIGESTER SUPERNATANT
SE	SCREENED EFFLUENT
SE	SCRUBBER EXHAUST
SEPT UNLDG	SEPTIC TANK UNLOADING
SL	ALUM SLUDGE
SO	SULFUR DIOXIDE
SOA	SULFURIC ACID
SP	SODIUM PERMANGANATE
SPD	SUMP PUMP DISCHARGE
SPRAY	SPRAY WATER
SRC	SCRUBBER RECIRCULATION CLEANING
SRD	SCRUBBER RECIRCULATION DISCHARGE
SRS	SCRUBBER RECIRCULATION SUCTION
SS	SANITARY SEWER
SSFM	SANITARY SEWER FORCE MAIN
STM	STEAM
STORM	STORM DRAIN
SW	SETTLED WATER
TMP	TRANS MEMBRANE PRESSURE
TS	THICKENED SLUDGE
TW	TREATED WATER
V	VENT
VAC	VACUUM
WAS	WASTE ACTIVATED SLUDGE

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STANDARD ABBREVIATIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	REVISION RECORD/MARK-UP	
			DATE	DESCRIPTION
A	RDD	MA	MAY 2022	90% REVIEW SUBMITTAL
B			MAY 2022	100% REVIEW SUBMITTAL

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SAVED 5/4/2022
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POWER

- NEMA 5-20 DUPLEX RECEPTACLE (FLUSH) MOUNTED 18" AFF UNLESS NOTED OTHERWISE. (AC INDICATES ABOVE COUNTER)
- NEMA 5-20 DUPLEX RECEPTACLE (SURFACE) MOUNTED 18" AFF UNLESS NOTED OTHERWISE. (AC INDICATES ABOVE COUNTER)
- GFI — GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE FLUSH OR SURFACE MOUNTED UNLESS NOTED OTHERWISE.
- NEMA 5-20 SIMPLEX RECEPTACLE (FLUSH OR SURFACE) MOUNTED 18" AFF UNLESS NOTED OTHERWISE. (AC INDICATES ABOVE COUNTER)
- JUNCTION BOX
- DIRECT CONNECTION TO EQUIPMENT BY OTHER TRADES. PROVIDE FLEXIBLE METAL CONDUIT AS REQUIRED FOR POWER AND SIGNAL WIRING.
- $W — HEAVY DUTY, 20 AMP, 125 VOLT TOGGLE SWITCH
- M — MOTOR, # INDICATES MOTOR HP, F INDICATES FRACTIONAL HORSEPOWER.
- UNFUSED DISCONNECT SWITCH. SIZE AS INDICATED ON DRAWINGS
- FUSED DISCONNECT SWITCH. SIZE FUSES FOR EQUIPMENT BASED ON MANUFACTURERS RECOMMENDATIONS
- COMBINATION STARTER / DISCONNECT SWITCH. SIZE FOR EQUIPMENT BASED ON MANUFACTURERS RECOMMENDATIONS
- SURFACE MOUNTED PANELBOARD. REFER TO PANEL SCHEDULES FOR VOLTAGE CONFIGURATION.
- RECESSED MOUNTED PANELBOARD. LINE INDICATES WALL FACE. REFER TO PANEL SCHEDULES FOR VOLTAGE CONFIGURATION.

WIRING

- A-21 / A-21 — BRANCH CIRCUIT. PROVIDE CONDUIT AND WIRING AS REQUIRED. ARROW INDICATES HOMERUN TO PANEL A CIRCUIT 21, BY WAY OF EXAMPLE.
- FLEXIBLE CONDUIT CONNECTION
- UNDERGROUND BRANCH CIRCUIT/CONTROL WIRING. PROVIDE CONDUIT AND WIRING AS REQUIRED

SINGLE LINE DIAGRAMS

- BREAKER
- STARTER REFER TO SCHEDULE FOR ADDITIONAL STARTER OPTIONS.
- CURRENT TRANSFORMER (SHOWN AROUND FEEDER)
- POWER TRANSFORMER
- DPM — DIGITAL POWER METER
- FUSE
- PDT 1234 — VALVE OR INSTRUMENT

ABBREVIATIONS

A	AMPERE
AC	ABOVE COUNTER / ALTERNATING CURRENT
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
#'C	# OF CONDUCTOR(S)
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DC	DIRECT CURRENT
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
FM	FREQUENCY MODULATION
GFI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
J	JUNCTION BOX
KVA	KILO-VOLT AMPERES
KWH	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
MCB	MAIN CIRCUIT BREAKER
MCCB	MOLDED CASE CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NF	NON-FUSED
NO.	NUMBER
P	POLE
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
RGS	RIGID GALVANIZED STEEL
RTA	RADIO TRANSMITTER
SPD	SURGE PROTECTION DEVICE
TV	TELEVISION/MONITOR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UON	UNLESS OTHERWISE NOTED
V	VOLT
VA	VOLTAMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WP	WEATHERPROOF COVER
XFMR	TRANSFORMER

GENERAL NOTES:

A. ALL SYMBOLS SHOWN ON THIS SHEET MAY NOT BE USED ON THIS PROJECT.

B. INSTALLATION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE LOCALLY ADOPTED NFPA 70 (NEC) CODE ALONG WITH APPLICABLE STATE AND LOCAL CODES.

C. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES DURING CONSTRUCTION.

D. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INCLUDE EVERY DETAIL OF REQUIRED CONSTRUCTION EQUIPMENT AND MATERIALS. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NOT SPECIFICALLY SHOWN ON THE DRAWINGS BUT WHICH ARE NECESSARY TO COMPLETE THE WORK. INSTALLATION SHALL BE COORDINATED WITH PIPING, DUCTWORK, STRUCTURAL STEEL ALONG WITH ROOM FINISHES.

E. CONDUIT ROUTING IS DIAGRAMMATIC. ROUTE PARALLEL AND PERPENDICULAR TO LINES OF BUILDING STRUCTURE. FIELD VERIFY EXACT ROUTING PER ACTUAL CONDITIONS. MINIMUM ACCEPTABLE CONDUIT SIZE IS ¾" ABOVE GRADE AND 1" UNDERGROUND.

F. CIRCUIT AMPACITY RATINGS ARE BASED ON RACEWAYS NOT EXCEEDING (3) CURRENT-CARRYING CONDUCTORS PLUS NEUTRAL CONDUCTORS AND EQUIPMENT GROUND CONDUCTOR PER NEC CODE. A SEPARATE NEUTRAL CONDUCTOR SHALL BE PROVIDED FOR EACH CURRENT CARRYING CONDUCTOR.

G. BOND ALL INTERIOR METALLIC PIPING SYSTEMS, INCLUDING NATURAL GAS, IN ACCORDANCE WITH NFPA 70-250 REQUIREMENTS.

H. PROVIDE A GREEN-INSULATED GROUNDING CONDUCTOR, SIZED PER NEC ARTICLE 250, IN ALL FEEDER AND BRANCH CIRCUIT RACEWAYS.

I. PROVIDE A PULL WIRE IN EACH EMPTY CONDUIT.

J. FIRE SEAL ALL CONDUIT PENETRATIONS OF FIRE RATED WALLS.

K. DO NOT USE ANY LIGHT FIXTURE AS A RACEWAY FOR CONDUCTORS NOT SERVING FIXTURE, UNLESS FIXTURE IS DESIGNATED AND UL-LISTED FOR USE AS A RACEWAY.

L. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN (RCP) FOR EXACT LOCATION OF OVERHEAD LIGHT FIXTURES.

M. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ELECTRICAL OUTLETS WITH CASEWORK, FURNITURE AND MILLWORK. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR DETAILS.

N. COORDINATE MOUNTING HEIGHT AND ORIENTATION OF "ABOVE COUNTER" DEVICES WITH ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN. IF NOT DIRECTED OTHERWISE, INSTALL "ABOVE COUNTER" OUTLETS VERTICALLY 4" ABOVE BACKSPLASH OR TOP SURFACE OF COUNTER WHEN A BACKSPLASH IS NOT INCLUDED.

O. DO NOT ATTACH STARTERS AND DISCONNECTS FURNISHED FOR HVAC EQUIPMENT DIRECTLY TO EQUIPMENT. PROVIDE WALL-MOUNT SUPPORT OR INDEPENDENTLY SUPPORT ON STEEL ANGLE OR UNISTRUT RACK CONSTRUCTED FOR THAT PURPOSE. LOCAL DISCONNECTS FOR HVAC EQUIPMENT SHALL BE FURNISHED SEPARATELY FROM THE HVAC EQUIPMENT.

P. VERIFY EXACT MECHANICAL EQUIPMENT TO BE INSTALLED. ADJUST CONDUIT, WIRING, DISCONNECT SIZE AND FUSING PER MANUFACTURER FINAL REQUIREMENTS FOR ACTUAL EQUIPMENT INSTALLED.

Q. BASIS OF DESIGN MANUFACTURERS AND MODELS ARE SHOWN ON THE PLANS. THESE PROVIDE ONLY A MINIMUM LEVEL OF QUALITY AND ARE NOT INTENDED AS PROPRIETARY SPECIFICATIONS. REFER TO SPECIFICATIONS FOR SUBSTITUTION REQUIREMENTS AND PROCEDURES.

R. CONTRACTOR SHALL VISIT THE PROJECT SITE AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS THAT MAY AFFECT EXECUTION OF THE WORK.

S. "PROVIDE" IS AN ALL-INCLUSIVE TERM REQUIRING THE CONTRACTOR TO FURNISH, INSTALL WIRE AND CONNECT ALL SPECIFIED EQUIPMENT AS WELL AS COMPONENTS, ACCESSORIES, AND MOUNTING HARDWARE TO MEET SYSTEM REQUIREMENTS.

T. "INSTALL" SPECIFIES THAT THE CONTRACTOR SHALL INSTALL EQUIPMENT PROVIDED BY OTHERS. THE CONTRACTOR SHALL PROVIDE ALL ANCILLARY EQUIPMENT FOR A COMPLETE INSTALLATION.

U. CONDUCTORS SHALL BE THHN/THWN-2 COPPER. MINIMUM SIZE IS #12 AWG.

V. MATCH AIC RATINGS AND ALL OTHER CHARACTERISTICS OF EXISTING DEVICES IN MCC'S, PANELBOARDS, SWITCHBOARDS, ETC. WHEN ADDING DEVICES TO THE EXISTING GEAR.

W. INDEPENDENTLY SUPPORT ALL CABLES NOT ENCLOSED IN CONDUIT, CABLE TRAY, WIREWAY OR OTHER SPECIFIED RACEWAY FROM BUILDING STRUCTURE. DO NOT ATTACH TO ANY CEILING SYSTEM, CONDUIT, DUCTWORK, PIPING OR SIMILAR APPURTENANCE AS A MEANS OF SUPPORT.

BARGE DESIGN SOLUTIONS

Brian W Landry

LEGEND AND GENERAL NOTES

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	DR.	CK.	DATE	DESCRIPTION
A	CSM	BL	04/15/21	30% REVIEW SUBMITTAL
B	CSM	BL	05/02/22	OWNER AND AGENCY REVIEW

00-E001

FILE NO. 3643211

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CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS HAVE BEEN USED AS THE BASIS FOR DESIGN AND/OR SHALL BE UTILIZED BY THE CONTRACTOR TO ESTABLISH MINIMUM LEVELS OF QUALITY AND CONSTRUCTION TECHNIQUES.

1. GENERAL:
   - A. INTERNATIONAL BUILDING CODE (IBC) 2018, WITH GEORGIA STATE AMENDMENTS
   - B. ASCE 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"
2. CONCRETE:
   - A. AMERICAN CONCRETE INSTITUTE (ACI) 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
   - B. ACI 350-06, "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
   - C. ACI 350, "TIGHTNESS TESTING OF ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
   - D. ACI 301, LATEST EDITION, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   - E. ACI 117, LATEST EDITION, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
   - F. ACI 308.1, LATEST EDITION, "SPECIFICATION FOR CURING CONCRETE"
   - G. ACI 302.1, LATEST EDITION, "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
   - H. ACI 315, LATEST EDITION, "DETAILS AND DETAILING OF REINFORCED CONCRETE STRUCTURES"
   - I. ACI SP-66, LATEST EDITION, "ACI DETAILING MANUAL"
   - J. CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
   - K. AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) A615, LATEST EDITION, "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN CARBON-STEEL BARS FOR CONCRETE REINFORCEMENT"
4. STRUCTURAL STEEL:
   - A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "MANUAL OF STEEL CONSTRUCTION, 15TH EDITION"
   - B. AMERICAN WELDING SOCIETY (AWS) D1.1, "STRUCTURAL WELDING CODE- STEEL"
5. ALUMINUM:
   - A. ALUMINUM DESIGN MANUAL - 2010
   - B. AWS D1.2, "STRUCTURAL WELDING CODE- ALUMINUM"

DESIGN CRITERIA

1. RISK CATEGORY: III
2. DEAD LOADS: ACTUAL WEIGHTS OF BUILDING MATERIALS, STRUCTURAL COMPONENTS, AND EQUIPMENT.
3. LIVE LOADS: IN ACCORDANCE WITH ASCE 7
   - A. GUARDRAILS/HANDRAILS:
     - i. 50 PLF FOR AREAS W/ OCCUPANT LOAD GREATER THAN OR EQUAL TO 50.
     - ii. OR 20 PLF FOR AREAS W/ OCCUPANT LOAD LESS THAN 50.
     - iii. OR 200 LB CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT.
   - C. LADDERS (FIXED): 300 LB CONCENTRATED LOAD FOR EVERY 10 FT OF HEIGHT
   - D. CATWALKS: 40 PSF
   - E. STAIRS/PLATFORMS: 100 PSF
5. WIND LOADS: IN ACCORDANCE WITH ASCE 7
   - A. ULTIMATE WIND SPEED = 115 MPH
   - B. NOMINAL WIND SPEED = 89.1 MPH
   - C. RISK CATEGORY: III
   - D. EXPOSURE CATEGORY: C
6. SEISMIC LOADS: IN ACCORDANCE WITH IBC
   - A. IMPORTANCE FACTOR, I: 1.25
   - B. SOIL SITE CLASS: D (ASSUMED)
   - C. SHORT-TERM ACCELERATIONS, Ss: 0.147
   - D. 1-SECOND ACCELERATIONS, S1: 0.079
   - E. SHORT-TERM RESPONSE COEFFICIENT, Sds: 0.156
   - F. 1-SECOND RESPONSE COEFFICIENT, Sd1: 0.126
   - G. SEISMIC DESIGN CATEGORY: B
   - H. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
   - I. BASIC SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
   - J. RESPONSE MODIFICATION FACTOR, R: 3
   - K. SEISMIC RESPONSE COEFFICIENT, Cs: 0.065
   - L. DESIGN BASE SHEAR: 0.065 x W
7. SNOW LOADS: IN ACCORDANCE WITH ASCE 7
   - A. IMPORTANCE FACTOR, I: 1.10
   - B. GROUND SNOW LOAD, PG: 5 PSF
   - C. EXPOSURE FACTOR, Ce: 0.9
   - D. THERMAL FACTOR, Ct: 1.0
8. RAIN LOADS
   - A. RAIN INTENSITY: 7.02 IN/HR

FOUNDATIONS

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING OR RELOCATING, AS APPLICABLE, ALL EXISTING UNDERGROUND UTILITIES AND OTHER STRUCTURES FROM DAMAGE DURING CONSTRUCTION.
2. FOUNDATION DESIGN WAS BASED ON THE PRESUMPTIVE LOAD-BEARING VALUES PROVIDED IN TABLE 1806.2 OF THE 2018 INTERNATIONAL BUILDING CODE.
   - A. ALLOWABLE DESIGN BEARING CAPACITY = 1,500 PSF
3. ALLOWABLE BEARING PRESSURES ARE BASED ON BEARING AGAINST FIRM, UNDISTURBED SOIL AND OR ENGINEERED BACKFILL. WHERE UNACCEPTABLE MATERIAL OCCURS, EXCAVATE AND REPLACE WITH ENGINEERED FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
4. SURFACE WATER SHALL NOT BE ALLOWED TO POND OR SATURATE SOILS DURING OR AFTER CONSTRUCTION.
5. HIGH PLASTICITY CLAYS AND ELASTIC SILTS SHOULD NOT BE USED FOR BACKFILL MATERIALS.
6. DISCHARGE FROM ROOF DRAINS SHALL BE CHANNELED WELL AWAY FROM FOUNDATIONS.
7. FOUNDATION SOILS SHALL BE ISOLATED FROM HEAT SOURCES TO PREVENT DRYING OF THE FOUNDATION SOILS.
8. PLANTINGS WITH HIGH WATER DEMANDS SHALL NOT BE PLANTED NEAR FOUNDATIONS.

CONCRETE

1. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI AT 28-DAYS. SEE SPECIFICATIONS FOR ADDITIONAL MIX DESIGN REQUIREMENTS
2. CONCRETE SHALL BE PROPORTIONED, BATCHED, MIXED, PLACED, CONSOLIDATED, AND CURED IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH THE SPECIFICATIONS.
3. FOR HYDRAULIC STRUCTURES, CONTRACTOR SHALL PROVIDE A MINIMUM OF 7-DAYS BETWEEN ADJACENT POURS. ADDITIONALLY, CONCRETE STRENGTH SHALL MEET OR EXCEED 70% OF THE SPECIFIED DESIGN COMPRESSIVE STRENGTH PRIOR TO PLACING ADJACENT POURS.
4. CONCRETE STRENGTH SHALL MEET OR EXCEED 100% OF THE SPECIFIED DESIGN COMPRESSIVE STRENGTH PRIOR TO APPLYING ANY LOAD TO THE MEMBER.
5. TREMIES ARE REQUIRED ON ALL POURS HIGHER THAN 10-FEET.
6. ALL HYDRAULIC STRUCTURES SHALL HAVE A 72-HOUR LEAKAGE TEST PERFORMED, AS OUTLINED IN THE SPECIFICATIONS, PRIOR TO BACKFILLING OR OPERATION OF THE FACILITY.
7. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4-INCH.

REINFORCING STEEL

1. REINFORCEMENT DETAILING SHALL BE AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS.
2. CONCRETE AND CMU REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 (DEFORMED BARS).
3. REINFORCING STEEL SHALL NOT BE WELDED OR FIELD BENT IN ANY MANNER, UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS. REINFORCING STEEL SHALL BE DRY AND FREE OF CONTAMINANTS SUCH AS DIRT, GREASE, EPOXY, AND OTHER PROTECTIVE COATINGS SHALL NOT BE APPLIED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
4. ALL REINFORCING STEEL BAR SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES IN ACCORDANCE WITH THE DRAWINGS AND THE REFERENCED CODES AND STANDARDS.
5. REINFORCING STEEL CLEAR COVER SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND THE REFERENCED CODES AND STANDARDS.

STRUCTURAL STEEL/ANCHORS

1. STRUCTURAL STEEL SHAPES SHALL BE AS FOLLOWS, U.N.O.:
   - A. L-SHAPES, PLATES, BARS: ASTM A36
2. ALL BOLTED CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS FOR STRUCTURAL MEMBERS SHALL BE AS FOLLOWS:
   - A. STEEL BOLTS: ASTM A325 WITH A 3/4-INCH MINIMUM DIAMETER
   - B. STAINLESS STEEL BOLTS: ASTM F593, TYPE 316, WITH A 3/4-INCH MINIMUM DIAMETER.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS AND SHALL BE PERFORMED BY CERTIFIED WELDERS.
   - A. WELDING ELECTRODES: E70XX
4. REMOVE ALL RUST, DIRT, PAINT, AND GALVANIZING FROM STEEL PRIOR TO WELDING.
5. NO OPENINGS SHALL BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
6. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANE. BOLTS SHALL BE TIGHTENED USING THE "SNUG TIGHT" METHOD. USE ONE HARDENED WASHER UNDER THE TURNED ELEMENT.
7. ALL BOLTED CONNECTION HOLES ARE TO BE STANDARD HOLES. SHORT SLOTTED HOLES ARE NOT PERMITTED (I.E. HOLE DIA. = BOLT DIA. + 1/16")
8. THE STRUCTURE IS DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE MAY REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.

CONCRETE/CMU ANCHORS

1. REFER TO SPEC SECTION 05 50 00 METAL FABRICATIONS FOR ADDITIONAL REQUIREMENTS AND MATERIAL TYPE.
2. SUBSTITUTION OF EXPANSION OR DRILLED AND GROUTED-IN ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
3. CARE SHALL BE TAKEN WHEN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH REINFORCING WHERE POSSIBLE. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE.
5. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC.
   - A. ANCHORAGE TO CONCRETE
     - i. ADHESIVE (EPOXY) ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
       1. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z-R 316 SS ROD.
       2. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM. WITH HAS-316 SS THREADED ROD PER ICC ESR-3187.
     - ii. MECHANICAL (EXPANSION) ANCHORS FOR CRACKED AND UNCRACKED CONCRETE
       1. HILTI KWIK BOLT-TZ SS 316 EXPANSION ANCHORS.
   - B. REBAR DOWELING INTO CONCRETE
     - i. ADHESIVE FOR CRACKED AND UNCRACKED CONCRETE USE:
       1. HILTI HIT-HY200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM

ALUMINUM FRAMING/GRATING

1. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE COATED WITH BITUMINOUS PAINT.
2. ALUMINUM ALLOYS SHALL BE AS FOLLOWS, OR APPROVED EQUAL:
   - A. PLATE/SHEET: ASTM B209, ALLOY 6061-T6
   - B. EXTRUSIONS/STRUCTURAL SHAPES: ASTM B221, ALLOY 6061-T6
   - C. CASTINGS: ASTM B26, ALLOY 443.0-F

MISCELLANEOUS

1. THE STRUCTURE SHOULD NOT BE CONSIDERED TO BE STABLE DURING CONSTRUCTION UNTIL ALL ELEMENTS ARE IN PLACE AND CONNECTED. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING ALL TEMPORARY CONSTRUCTION BRACING, AS REQUIRED.
2. CONSTRUCTION METHODS, PROCEDURES, AND SEQUENCES ARE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION, NEW AND EXISTING, AT ALL STAGES.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO ANY PERTINENT WORK. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE NOTED ON THE SHOP DRAWINGS.
4. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE DRAWINGS AND EXISTING CONDITIONS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN WALLS AND SLABS.
5. COORDINATE WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND VERIFY THE LOCATIONS AND SIZES OF THE OPENINGS, INSERTS, SLEEVES, FINISHES, CONDUITS, CHASES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
6. CONTRACTOR SHALL COMPLY WITH LOCAL, STATE, FEDERAL AND OWNER'S SAFETY REGULATIONS WHILE WORKING. STRUCTURAL ENGINEER DOES NOT ASSUME ANY RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY.
7. STANDARD DETAILS APPLY UNLESS INDICATED OTHERWISE ON SPECIFIC STRUCTURE DRAWINGS.
8. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

BARGE
DESIGN SOLUTIONS

GEORGIA REGISTERED No. SE000550 STRUCTURAL ENGINEER BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04 14:08:39-05'00'

STRUCTURAL GENERAL NOTES

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV	DR	CHK	DATE	DESCRIPTION
A	CBH	JRT	5/11/2021	30% SUBMITTAL REVIEW
B	CBH	JRT	05/02/2022	OWNER AND AGENCY REVIEW

00-S001

FILE NO. 3643211

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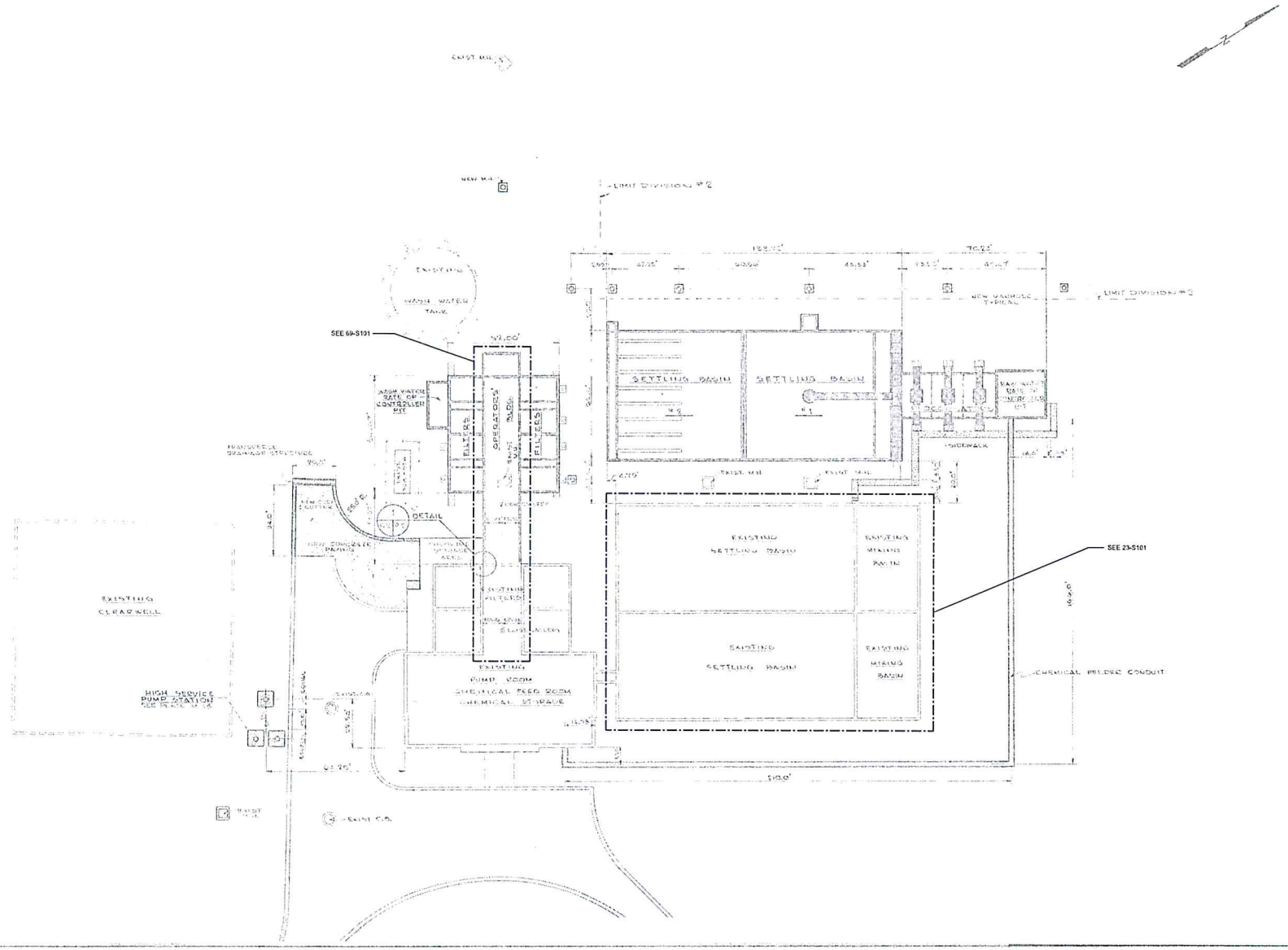

BARGE DESIGN SOLUTIONS

GEORGIA REGISTERED No. SE0X0550 STRUCTURAL ENGINEER BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04
14:08:05-05'00'

STRUCTURAL OVERALL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION				
REV	DR	CHK	DATE	DESCRIPTION
A	CBH	JRT	5/11/2021	10% SUBMITTAL REVIEW
B	CBH	JRT	05/05/2022	DWN STRUCTURAL REVIEW

00-S100

FILE NO. 3643211

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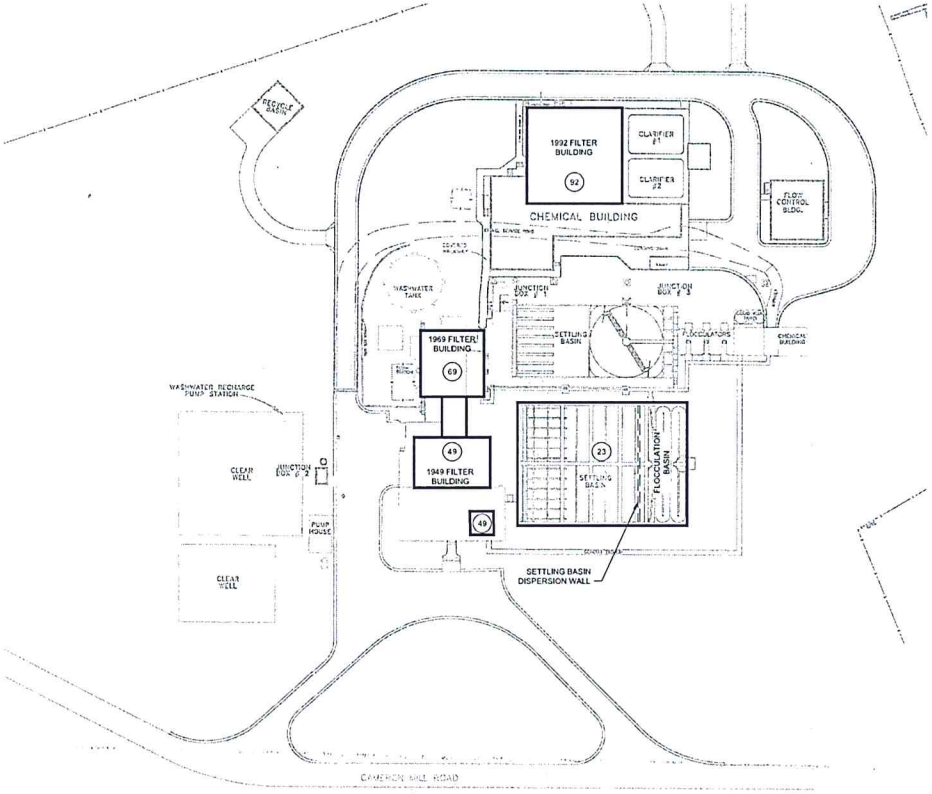


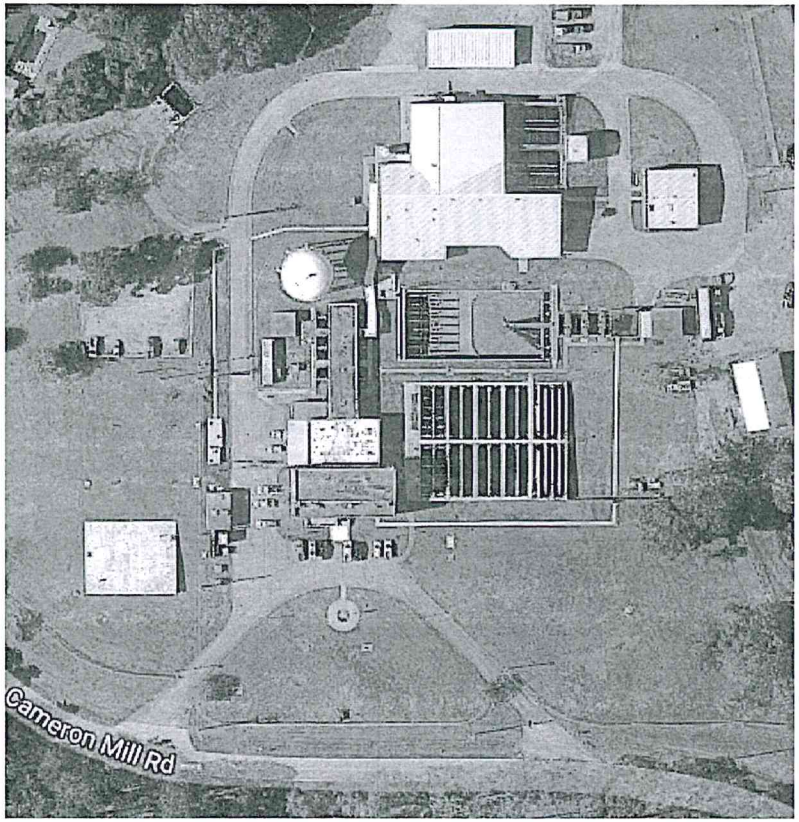
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS, PREPARED BY WELKER AND ASSOCIATES INC.

OVERALL SITE PLAN

SCALE: 1 INCH = 50 FEET

0 50' 100'



OVERALL SITE - AERIAL

BARGE DESIGN SOLUTIONS

1201 Front Avenue | Suite 6 | Columbus, GA 31901
PHONE (706) 327-4532

GEORGIA REGISTERED PROFESSIONAL ENGINEER 23365 MICHAEL P. ALEXANDER

Digital signed by Michael P Alexander
Date: 2022.05.05 16:53:47-04'00'

OVERALL SITE PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	MAS	MA	04/29/2022	90% DESIGN SUBMITTAL
B	AD	MA	05/02/2022	OWNER AND AGENCY REVIEW

01-C101

FILE NO. 36432-11

USER: MARWALKER
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SAVED: 4/22/2022
PLOTTED: 5/5/2022

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VALVES

- GATE VALVE OR OTHER IN-LINE TYPE NOT OTHERWISE IDENTIFIED
- BALL
- BUTTERFLY
- PLUG
- CHECK
- WAFER CHECK
- NEEDLE
- DIAPHRAGM
- GLOBE
- PINCH
- ANGLE
- THREE WAY
- FOUR WAY
- BACKFLOW PREVENTER
- KNIFE
- MUD (PLAN, SECT)
- PRESSURE REDUCING VALVE
- PRESSURE RELEASE VALVE
- VACUUM RELIEF VALVE
- TELESCOPING

GATES

- SLIDE (OR)
- WEIR
- FLAP

FITTING SYMBOLS

- REDUCER - CONCENTRIC
- REDUCER - ECCENTRIC
- PIPE CLEANOUT PORT
- UNION
- FLANGE
- PIPE BREAK
- CAP
- PLUG
- DRAIN - BELL UP
- DRAIN - FUNNEL
- FLEXIBLE TUBING
- EXPANSION JOINT
- QUICK CONNECT
- STRAINER - WYE TYPE
- STRAINER - BASKET TYPE
- DIAPHRAGM SEAL

PRIMARY ELEMENT

- ELECTROMAGNETIC FLOWMETER
- PARSHALL FLUME
- PROPELLER OR TURBINE FLOW METER
- ULTRASONIC FLOW METER (CLAMP-ON)
- VENTURI TUBE
- VORTEX FLOWMETER
- ROTAMETER
- FLOAT SWITCH
- BUBBLER TUBE

PUMP & BLOWER SYMBOLS

- CENTRIFUGAL PUMP OR OTHER TYPE NOT SPECIFIED (XX)
- PISTON PUMP (XX)
- VERTICAL PUMP (XX)
- METERING PUMP (XX)
- SUBMERSIBLE PUMP (XX)
- SLIDE SLOPE PUMP
- SUBMERSIBLE AXIAL FLOW PUMP (XX)
- PROGRESSIVE CAVITY PUMP (XX)
- GEAR OR ROTARY PUMP OR BLOWER (POSITIVE DISPLACEMENT) (XX)
- AIR COMPRESSOR (2 STAGE SHOWN)
- CENTRIFUGAL BLOWER OR FAN (XX)
- SCREW PUMP (XX)

XX:
- AS ADJUSTABLE SPEED
- CS-1 CONSTANT SPEED (SINGLE)
- CS-2 CONSTANT SPEED (TWO)

MISCELLANEOUS SYMBOLS

- FILTER
- SILENCER
- BELT WEIGH SCALE
- WEIGH SCALE

WASTEWATER PROCESS SYMBOLS

- MIXER OR SURFACE ASPIRATOR
- DIFFUSER
- UV BANK

SOLIDS HANDLING EQUIPMENT SYMBOLS

- ROTARY SCREEN
- CYCLONE SEPARATOR
- GRIT COLLECTOR: HYDRAULIC TYPE
- GRIT COLLECTOR: VORTEX TYPE
- GRIT CONCENTRATOR & DEWATERING SCREW
- SCREW CONVEYOR OR SCREW PRESS
- BELT CONVEYOR
- INLINE GRINDER
- CHANNEL MTD GRINDER
- BAR SCREEN: MANUAL
- BAR SCREEN: MECHANICAL

VALVE & GATE ACTUATOR SYMBOLS

- MOTOR OPERATOR (M)
- SOLENOID OPERATOR (S) XX
- PNEUMATIC OPERATOR (P) XX

THE FOLLOWING ADDITIONAL DESIGNATIONS MAY BE UTILIZED ADJACENT TO SOME VALVE OR GATE SYMBOLS.

XX:
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- FC FAILS CLOSED
- FO FAILS OPEN
- FIP FAILS IN LAST POSITION

CHEMICAL FEED EQUIPMENT SYMBOLS

- CHLORINE CYLINDER
- CHEMICAL STORAGE
- POLYMER BLENDER FEEDER
- EDUCTOR
- INJECTOR
- CALIBRATION COLUMN
- STATIC IN-LINE MIXER

BARGE DESIGN SOLUTIONS
1201 Front Avenue | Suite F | Columbus, GA 31901
PHONE (706) 327-4800

GEORGIA REGISTERED PROFESSIONAL ENGINEER
No. 24365
MICHAEL PAUL ALEXANDER

Digitally signed by Michael L. Alexander
Date: 2022.05.05 16:53:56-04'00'

P&ID - STANDARD SYMBOLS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	REVISIONS/ISSUE DATA
A	AMS	MA	90% REVIEW SUBMITTAL MAY 2021
B	AQ	MA	50% REVIEW SUBMITTAL OWNER AND AES WTP REVIEW 04/01/2022

03-DI001

FILE NO. 36432-11

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USER: AMPARKER
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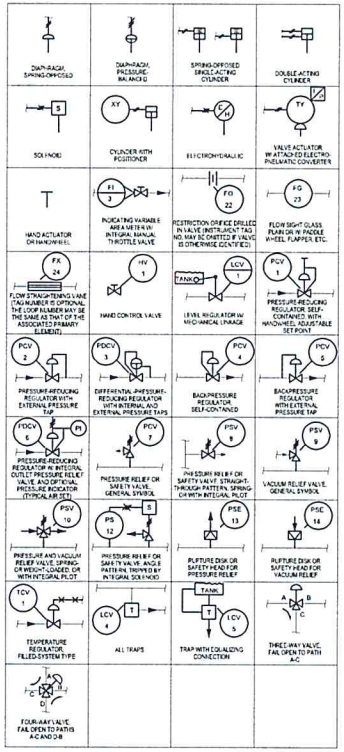
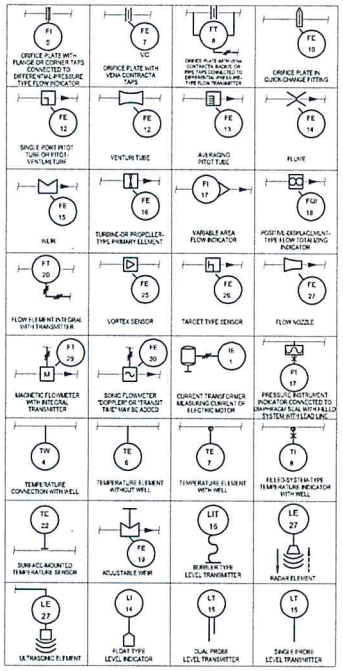
SAVED: 5/5/2022
PLOTTED: 5/5/2022

	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR (NOTE 1)	FIELD MOUNTED (NOTE 2)	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR (NOTE 1)
DISCRETE INSTRUMENTS			
SHARED DISPLAY, SHARED CONTROL (SCADA)			
COMPUTER FUNCTION			
PROGRAMMABLE LOGIC CONTROL (PLC)			
INSTRUMENT WITH LONG TAG NUMBER	INSTRUMENT SHARING COMMON HOUSING	PILOT LIGHT	PURGE OR FLUSHING DEVICE
RESET FOR LATCH-TYPE ACTUATOR	DIAPHRAGM SEAL	NOTE 4 NOTE 3 UNDEFINED INTERLOCK LOGIC	TOTAL

NOTES

1. NORMALLY INACCESSIBLE TO BEHIND-THE-PANEL DEVICES OR FUNCTIONS ARE DEPICTED BY USING THE SAME SYMBOLS BUT WITH DASHED HORIZONTAL BARS, I.E.:
2. SUPERSCRIPT DENOTES ADDITIONAL FUNCTIONAL DESCRIPTION OF INSTRUMENT. SEE INSTRUMENT DESIGNATIONS FOR DEFINITIONS.
3. SUBSCRIPT DENOTES PANEL OR CABINET I.D.
4. SUPERSCRIPT REFERS TO INTERLOCK SPECIFICATION.





SYMBOL	LINE DESCRIPTION
	FURNISHED BY OTHERS, INSTALLED BY CONTRACTOR
	INSTRUMENT SUPPLY OR CONNECTION TO PROCESS
	UNDEFINED SIGNAL
	PNEUMATIC SIGNAL
	ELECTRIC SIGNAL
	ELECTRONIC SIGNAL
—A—A—	ANALOG SIGNAL
—L—L—	HYDRAULIC SIGNAL
—X—X—	CAPILLARY TUBE
	ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)
	ELECTROMAGNETIC OR SONIC SIGNAL (NOT GUIDED)
	INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
	MECHANICAL LINK
	PNEUMATIC BINARY SIGNAL
	ELECTRIC BINARY SIGNAL
	PRIMARY PROCESS LINE
	PROCESS OR MECHANICAL EQUIPMENT
	LIMITS OF EQUIPMENT SUPPLIED BY MANUFACTURE
	PROCESS SECONDARY LINE
	ELECTRICALLY TRACED AND INSULATED LINE
	DOUBLE CONTAINMENT LINE
	EXISTING LINE OR DEVICE

INSTRUMENT DESIGNATIONS

CL2	CHLORINE RESIDUAL
CO2	CARBON DIOXIDE
DO	DISSOLVED OXYGEN
LEL	LOWER EXPLOSIVE LIMIT
MCC	MOTOR CONTROL CENTER
MLSS	MIXED LIQUOR SUSPENDED SOLIDS
O2	OXYGEN (PURITY)
ORP	OXIDATION REDUCTION POTENTIAL
OVLD	OVERLOAD
pH	pH CELL
SD	SLUDGE DENSITY
TURB	TURBIDITY
UV	UV TRANSMITTANCE
LOR	LOCAL - OFF - REMOTE
EOT	END OF TRAVEL
RM	REVERSE MOTION

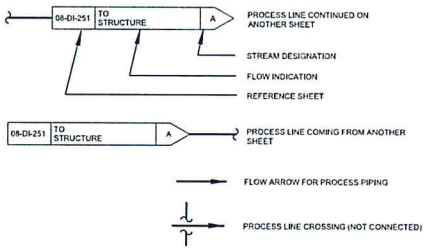
ELECTRICAL LINE FUNCTIONS

----QY----

- SIGNAL TYPE
- SIGNAL QUANTITY

SIGNAL TYPE

A	- ANALOG - #16 TWISTED SHIELDED PAIR
A1	- ANALOG - #16 3 CONDUCTOR TWISTED SHIELDED TRIAD
AS	- ANALOG - SPECIAL (EIA-432, EIA-485...)
D	- #14 2 CONDUCTOR
DS	- DISCRETE - SPECIAL (24 VOLT ...)
M	- WIRING BY MANUFACTURER
P	- POWER
C6	- COMMUNICATIONS - CAT 6 ETHERNET
P(V)	- POWER (SHIELDED VFD CABLE)



INSTRUMENT IDENTIFICATION LETTERS					
	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME / SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE	MOMENTARY			MIDDLE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	TOTALIZE			
R	RADIATION		RECORD		
S	SPEED / FREQ.	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBR/MECH ANALYSIS			VALVE, DAMPER	
W	WEIGHT / FORCE		WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT/STATE/PREF	Y-AXIS		RELAY/COMPUTE	
Z	POSITION	Z-AXIS		DRIVER/ACTUATOR	

NOTES:

1. THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED ON THIS SPECIFIC PROJECT.
2. PIPING AND EQUIPMENT LEGEND APPLIES TO PROCESS AND INSTRUMENTATION SHEETS ONLY AND MAY DIFFER FROM LEGENDS ON OTHER SHEETS.

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PHONE (706) 324-4400

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Date: 2022.05.05 16:54:06-04'00'

P&ID - INSTRUMENTATION LEGEND

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJS	MA	05/05/2022	90% PDR SUBMITTAL
B	AJS	MA	05/05/2022	OWNER AND AGENCY REVIEW

03-DI002

FILE NO. 36432-11

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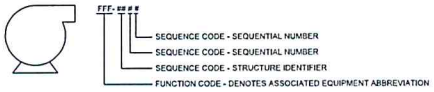
EQUIPMENT IDENTIFICATION DESCRIPTION



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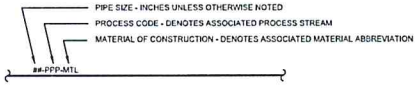

FUNCTION CODE ABBREVIATIONS

AER	AERATOR / AERATION
ASP	SURFACE ASPIRATOR
ASU	AUTOMATIC SWITCHOVER UNIT
BLR	BLOWER
BSN	BASIN
CLR	CLARIFIER
CMP	COMPRESSOR
CNV	CONVEYOR
COB	CONVEYOR: BELT
CRN	CRANE
DEC	SLUDGE DECANTER
DIF	DIFFUSER
DWS	DEWATERING SCREW PRESS
DWB	DEWATERING BOX
EDC	EDUCTOR
FIL	FILTER
G	GATE
GF	GAS FEEDER
GRB	GRIT BASIN
GRT	GRIT
HST	HOIST
INJ	INJECTOR
MXR	MIXER
P	PUMP
PMX	POLYMER MIX SKID
SB	SPLITTER BOX
SC	SCUM COLLECTOR
SCL	SCALE
SCR	SCREEN
SLC	SLUDGE COLLECTOR
SHS	SEPTAGE RECEIVING STATION
TNK	TANK
UV	ULTRAVIOLET
V	VALVE
WCMP	WASHER/COMPACTOR

PROCESS CODE ABBREVIATIONS

AER	AERATION
AHP	AIR HIGH PRESSURE
ALP	AIR LOW PRESSURE
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE
CEN	CENTRATE
CIP	CLEAN-IN PIPE
CL2	CHLORINE GAS
CLS	CHLORINE SOLUTION
CMS	COMPRESSED AIR-SERVICE
CON	CONCENTRATE
CS	CONDITIONED SLUDGE
CW	COLD WATER (POTABLE)
DAL	DISSOLVED ALUM
DEC	DECANT
DF	DIESEL FUEL
DG	DIGESTER GAS
DR	DRAIN
DS	DIGESTED SLUDGE
DWFL	DEWATERING FLOCCULATION
EI	EQUALIZATION TANK INFLUENT
ER	EQUALIZATION TANK RETURN
F	FILTRATE
FACD	FACILITY DRAIN
FE	FINAL EFFLUENT
FM	FORCE MAIN
FO	FUEL OIL
FOV	FUEL OIL VENT
FOGS	FATS, OILS, GREASE & SEPTAGE
FS	FINAL TANK SLUDGE
FW	FILTERED WASTEWATER
GRT	GRIT
IA	INSTRUMENT AIR
IR	IRRIGATION
HW	HOT WATER
LP	LIQUID PETROLEUM GAS (PROPANE)
MLSS	MIXED LIQUOR
NG	NATURAL GAS
NPW	NON POTABLE WATER
OF	OVERFLOW
PA	PROCESS AIR
PD	PLANT DRAIN
PE	PRIMARY EFFLUENT
PFM	PLANT FORCE MAIN
PI	PRIMARY INFLUENT
POL	POLYMER (NEAT)
POLD	POLYMER (DILUTED)
PS	PRIMARY SLUDGE
PTE	SCREENED SEWAGE
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCS	RECIRCULATED SLUDGE
RS	RAW SEWAGE
S	SAMPLE
SC	SCUM
SCR	SCREENINGS
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SEP	SEPTAGE
SNT	SUPERNATANT
SS	SANITARY SEWER
TDS	THICKENED DIGESTED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UW	UTILITY WATER
V	VENT
WAS	WASTE ACTIVATED SLUDGE
WW	WASTE WATER

PIPELINE MATERIAL OF CONSTRUCTION ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
BSP	BLACK STEEL PIPE
CI	CAST IRON
CISP	CAST IRON SOIL PIPE
CMP	CORRUGATED METAL PIPE
CPP	CONCRETE PRESSURE PIPE
CPVC	CHLORINATED POLY (VINYL CHLORIDE) PIPE
CU	COPPER PIPE
CUP	COPPER TUBING
DIP	DUCTILE IRON PIPE
FRH	FLEXIBLE RUBBER HOSE
FRP	FIBERGLASS REINFORCED PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PE	POLYETHYLENE PIPE
PP	SANTOPRENE TUBING
PVC	POLY (VINYL CHLORIDE) PIPE
PVT	PVC TUBING
RCP	REINFORCED CONCRETE PIPE
STL	STEEL PIPE
SST	STAINLESS STEEL PIPE
VCP	VITRIFIED CLAY PIPE
(HT.INS)	HEAT TRACED AND INSULATED LINE

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P&ID - ABBREVIATIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	MJE	MJA	5/5/2022	75% SUBMITTAL
B	AED	MJA	05/05/2022	COMMENTS AND ADDITIONAL REVIEW

03-DI003

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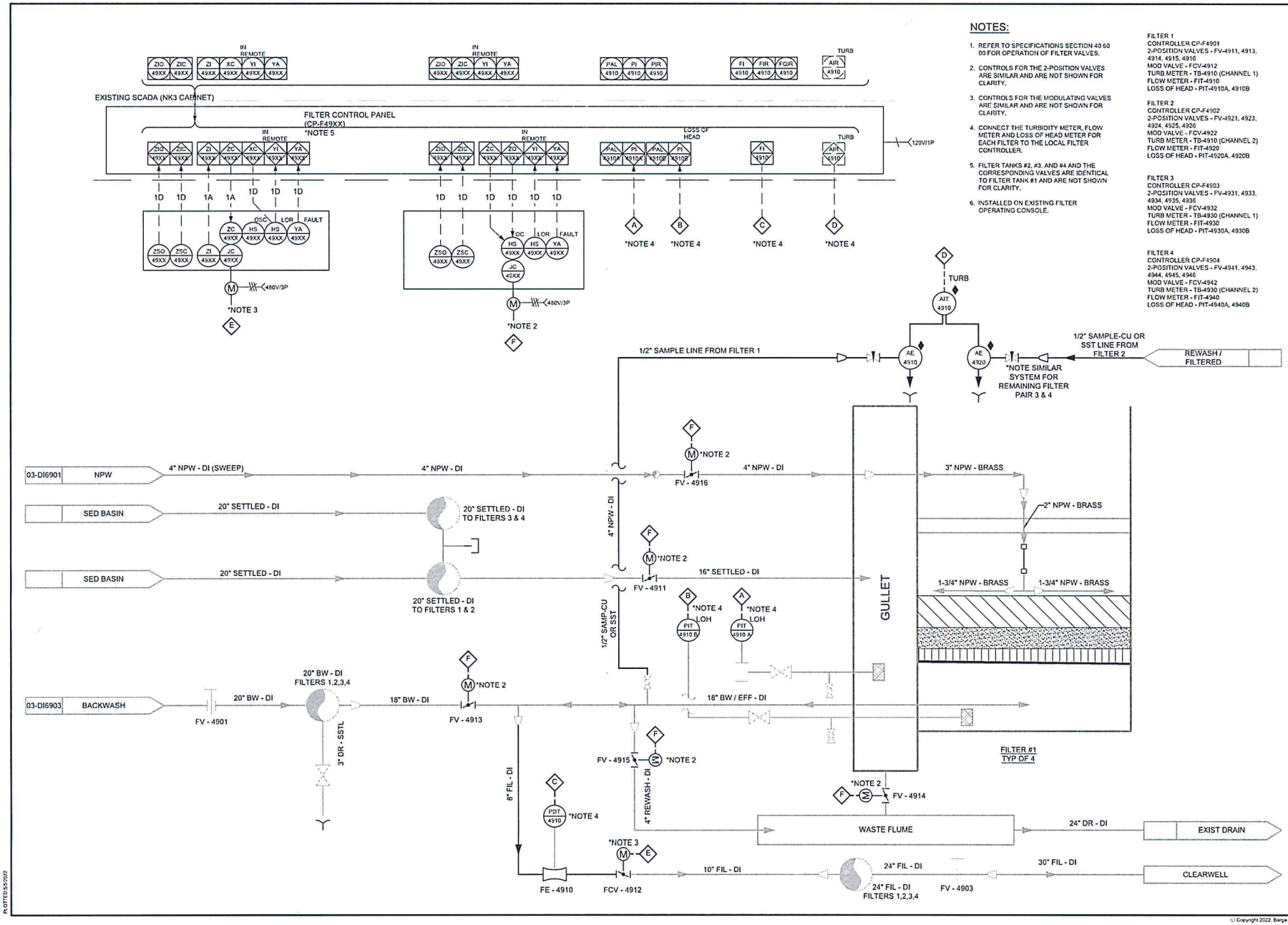

NOTES:

1. REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
2. CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
3. CONTROLS FOR THE MODULATING VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
4. CONNECT THE TURBIDITY METER, FLOW METER AND LOSS OF HEAD METER FOR EACH FILTER TO THE LOCAL FILTER CONTROLLER.
5. FILTER TANKS #2, #3, AND #4 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #1 AND ARE NOT SHOWN FOR CLARITY.
6. INSTALLED ON EXISTING FILTER OPERATING CONSOLE.

FILTER 1
CONTROLLER CP-F4901
2-POSITION VALVES - FV-4911, 4913, 4914, 4915, 4916
MOD VALVE - FCV-4912
TURB METER - TB-4910 (CHANNEL 1)
FLOW METER - FIT-4910
LOSS OF HEAD - PIT-4910A, 4910B

FILTER 2
CONTROLLER CP-F4902
2-POSITION VALVES - FV-4921, 4923, 4924, 4925, 4926
MOD VALVE - FCV-4922
TURB METER - TB-4910 (CHANNEL 2)
FLOW METER - FIT-4920
LOSS OF HEAD - PIT-4920A, 4920B

FILTER 3
CONTROLLER CP-F4903
2-POSITION VALVES - FV-4931, 4933, 4934, 4935, 4936
MOD VALVE - FCV-4932
TURB METER - TB-4930 (CHANNEL 1)
FLOW METER - FIT-4930
LOSS OF HEAD - PIT-4930A, 4930B

FILTER 4
CONTROLLER CP-F4904
2-POSITION VALVES - FV-4941, 4943, 4944, 4945, 4946
MOD VALVE - FCV-4942
TURB METER - TB-4930 (CHANNEL 2)
FLOW METER - FIT-4940
LOSS OF HEAD - PIT-4940A, 4940B

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PHONE (706) 327-4581

GEORGIA REGISTERED PROFESSIONAL ENGINEER
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Date: 2022.05.05 16:54:25-04'00'

P&ID - 1949 FILTER BASIN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	REVISION DESCRIPTION	DATE
A	KJS	MA	30% REVIEW SUBMITTAL	MAY 2021
B	JCD	MA	COMMENTS AND 100% REVIEW	05/05/2022

03-DI4901

FILE NO. 36432-11

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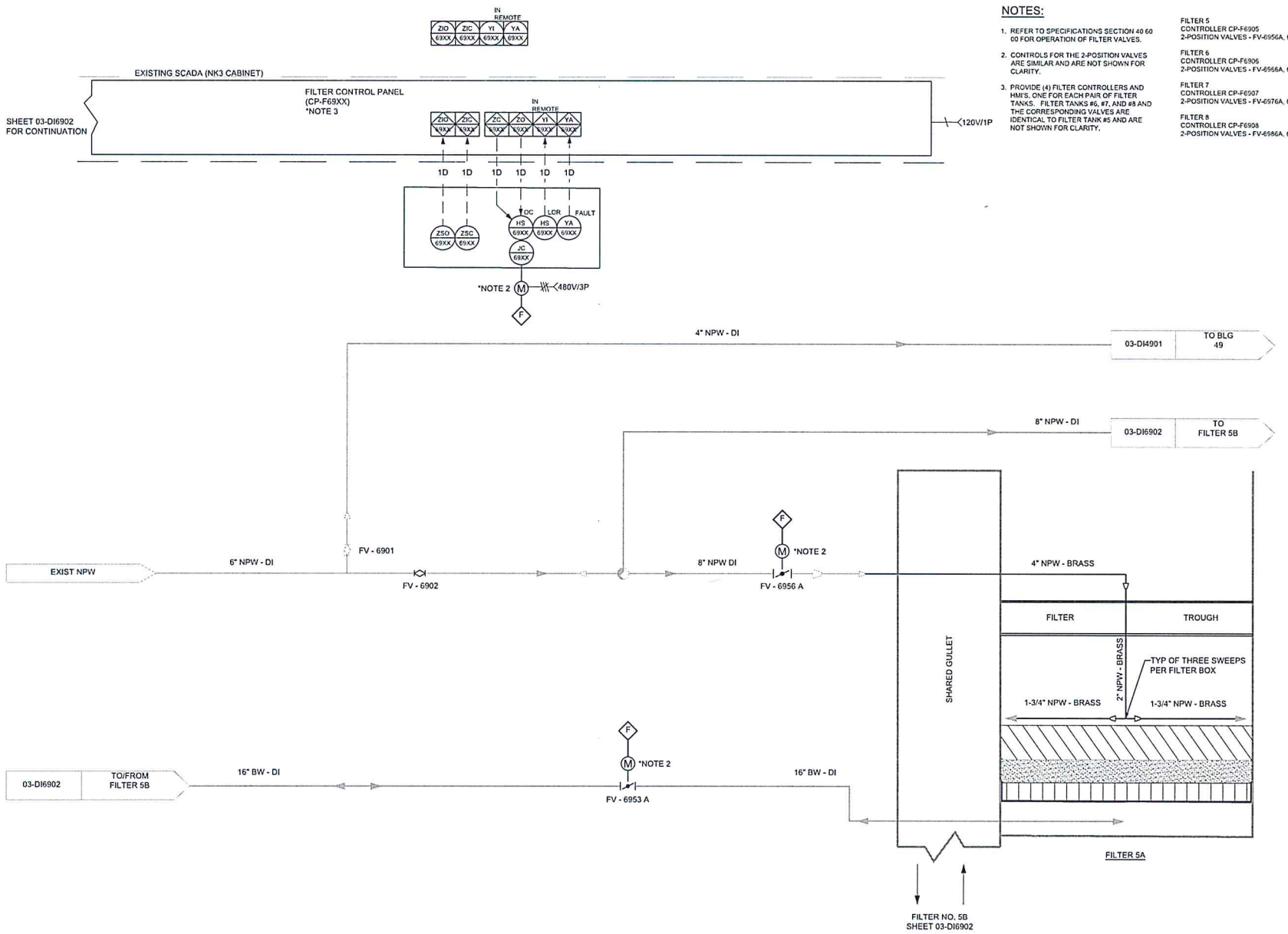

NOTES:

1. REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
2. CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
3. PROVIDE (4) FILTER CONTROLLERS AND HMI'S. ONE FOR EACH PAIR OF FILTER TANKS. FILTER TANKS #6, #7, AND #8 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #5 AND ARE NOT SHOWN FOR CLARITY.

FILTER 5
CONTROLLER CP-F6905
2-POSITION VALVES - FV-6956A, 6956B

FILTER 6
CONTROLLER CP-F6906
2-POSITION VALVES - FV-6966A, 6966B

FILTER 7
CONTROLLER CP-F6907
2-POSITION VALVES - FV-6976A, 6976B

FILTER 8
CONTROLLER CP-F6908
2-POSITION VALVES - FV-6986A, 6986B

BARGE DESIGN SOLUTIONS

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P&ID - 1969 FILTER BASIN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
A	AJD	MA	03-11-2021	100% DESIGN SUBMITTAL
B	AJD	MA	05-05-2022	FINAL FOR AGENCY REVIEW

03-DI6901

FILE NO. 36432-11

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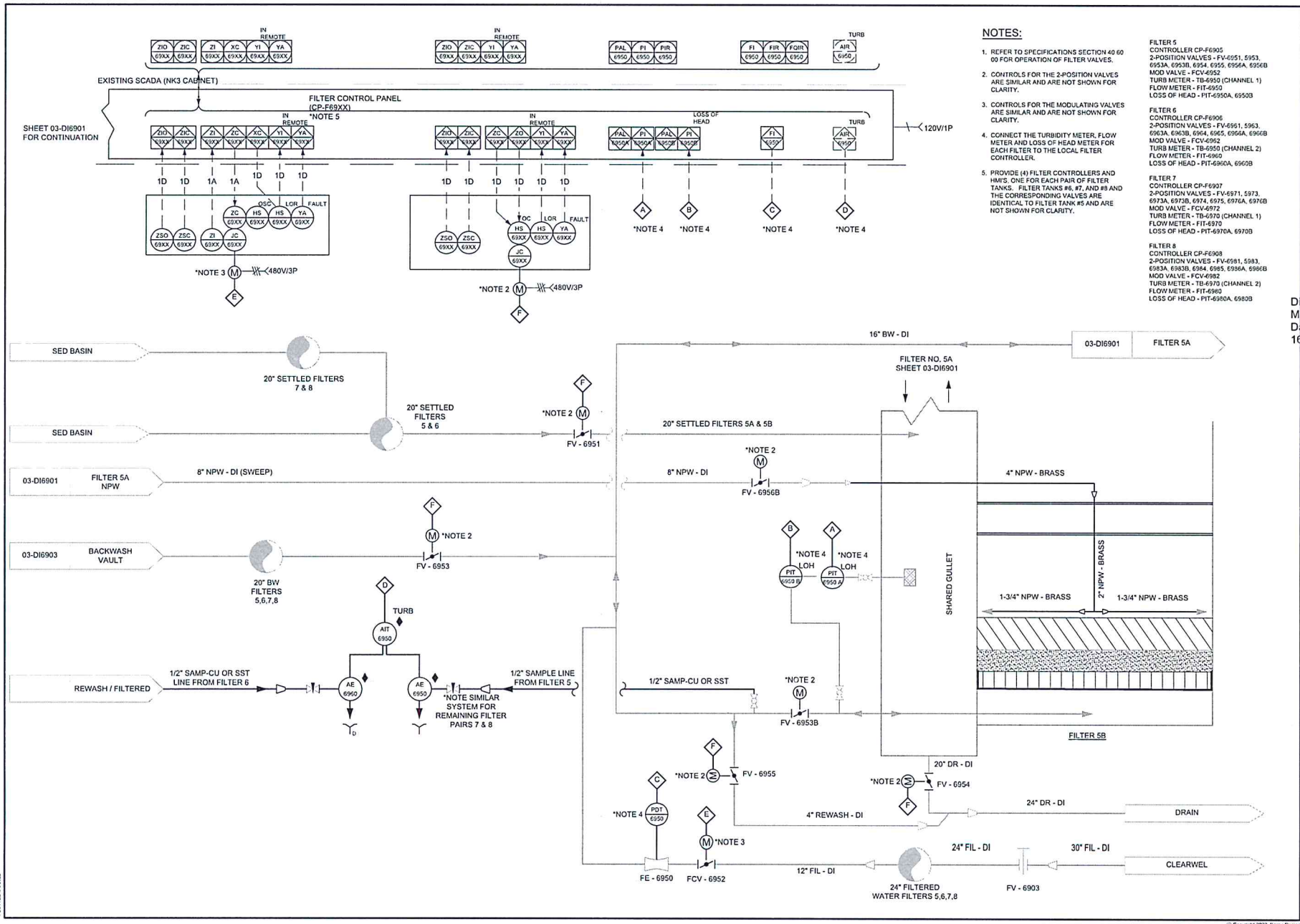
PLOTTED: 5/5/2022



NOTES:

1. REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
2. CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
3. CONTROLS FOR THE MODULATING VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
4. CONNECT THE TURBIDITY METER, FLOW METER AND LOSS OF HEAD METER FOR EACH FILTER TO THE LOCAL FILTER CONTROLLER.
5. PROVIDE (4) FILTER CONTROLLERS AND HMI'S. ONE FOR EACH PAIR OF FILTER TANKS. FILTER TANKS #6, #7, AND #8 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #5 AND ARE NOT SHOWN FOR CLARITY.

FILTER 5
CONTROLLER CP-F6905
2-POSITION VALVES - FV-6951, 5953, 6953A, 6953B, 6954, 6955, 6956A, 6956B
MOD VALVE - FCV-6952
TURB METER - TB-6950 (CHANNEL 1)
FLOW METER - FIT-6950
LOSS OF HEAD - PIT-6950A, 6950B

FILTER 6
CONTROLLER CP-F6906
2-POSITION VALVES - FV-6961, 5963, 6963A, 6963B, 6964, 6965, 6966A, 6966B
MOD VALVE - FCV-6962
TURB METER - TB-6950 (CHANNEL 2)
FLOW METER - FIT-6960
LOSS OF HEAD - PIT-6960A, 6960B

FILTER 7
CONTROLLER CP-F6907
2-POSITION VALVES - FV-6971, 5973, 6973A, 6973B, 6974, 6975, 6976A, 6976B
MOD VALVE - FCV-6972
TURB METER - TB-6970 (CHANNEL 1)
FLOW METER - FIT-6970
LOSS OF HEAD - PIT-6970A, 6970B

FILTER 8
CONTROLLER CP-F6908
2-POSITION VALVES - FV-6981, 5983, 6983A, 6983B, 6984, 6985, 6986A, 6986B
MOD VALVE - FCV-6982
TURB METER - TB-6970 (CHANNEL 2)
FLOW METER - FIT-6980
LOSS OF HEAD - PIT-6980A, 6980B

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PHONE (706) 327-4589

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P&ID - 1969 FILTER BASIN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	ENG.	CHK.	DATE	DESCRIPTION
A	AMB	MA	MAY 2022	90% SUBMITTAL
B	AD	MA	05/05/2022	OWNER AND AGENCY REVIEW

03-DI6902

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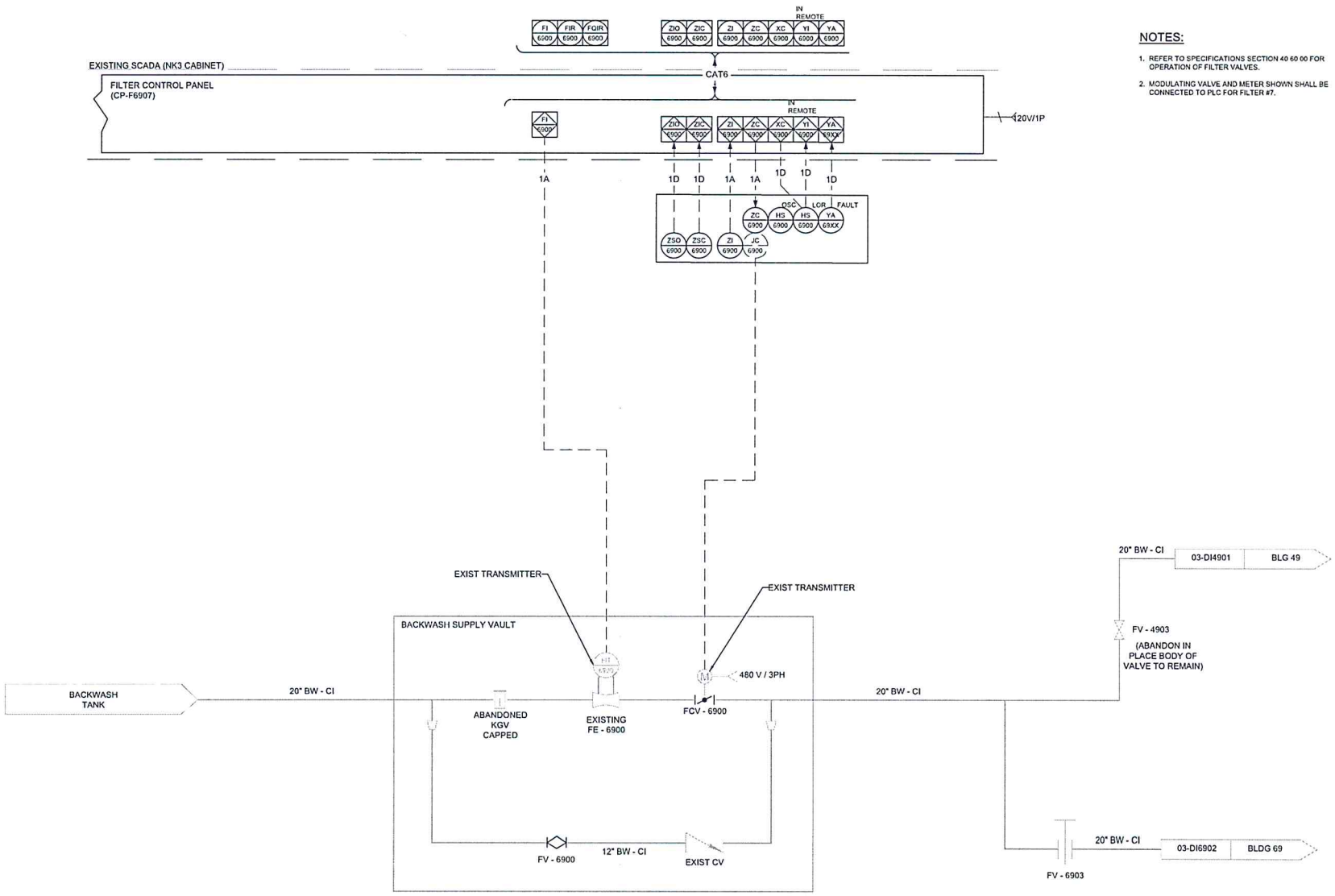

NOTES:

1. REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
2. MODULATING VALVE AND METER SHOWN SHALL BE CONNECTED TO PLC FOR FILTER #7.

BARGE DESIGN SOLUTIONS

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PHONE (706) 317-4190

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P&ID - 1969 BACKWASH CONTROL VAULT

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	CHK	CHK	DATE	DESCRIPTION
A	AJD	MA	MAY 2021	90% REVIEW SUBMITTAL
B	AJD	MA	05/05/2022	OWNER AND AGENCY REVIEW

03-DI6903

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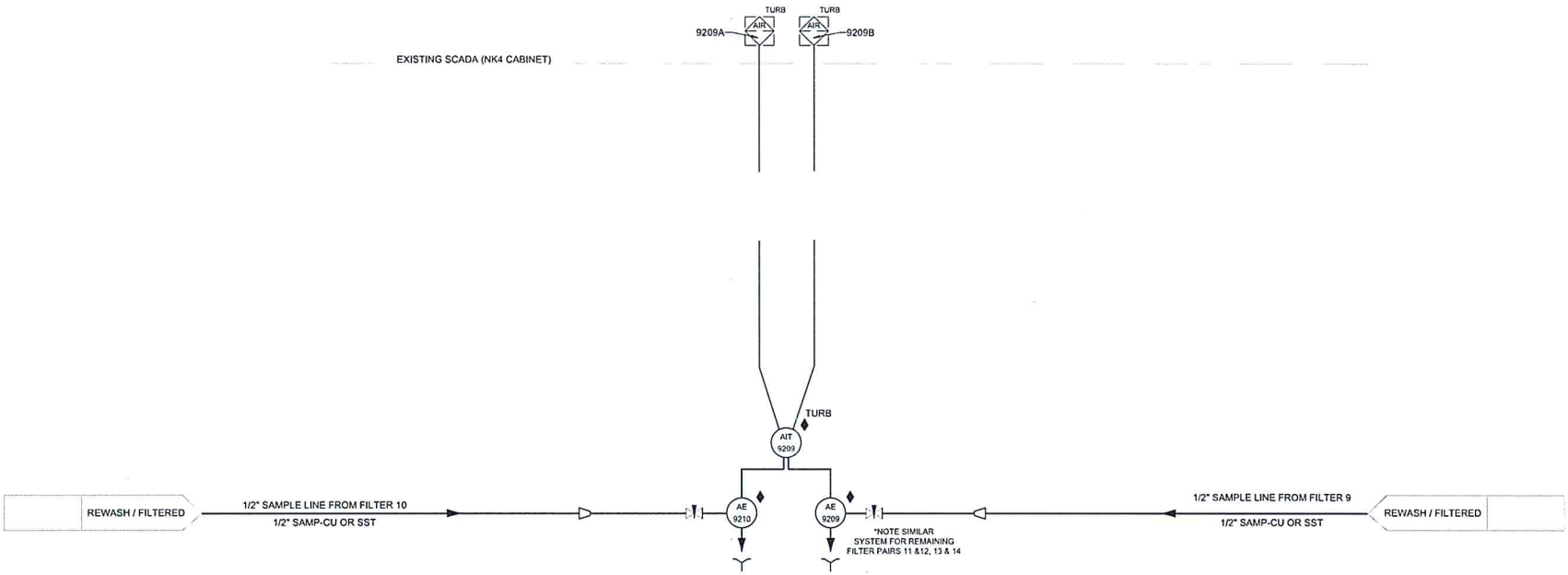

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PHONE (706) 327-4100

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Date: 2022.05.05 16:55:02-04'00'

P&ID - 1992 FILTER BASIN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	BY	CHK.	REVISION DESCRIPTION
A	AHR	MA	MAY 2021 - 30% PLANS FOR SUBMITTAL
B	AD	MA	05/05/2022 - COMMENTS AND AGENCY REVIEW

03-DI9201

FILE NO. 36432-11

USER: AMPARKER
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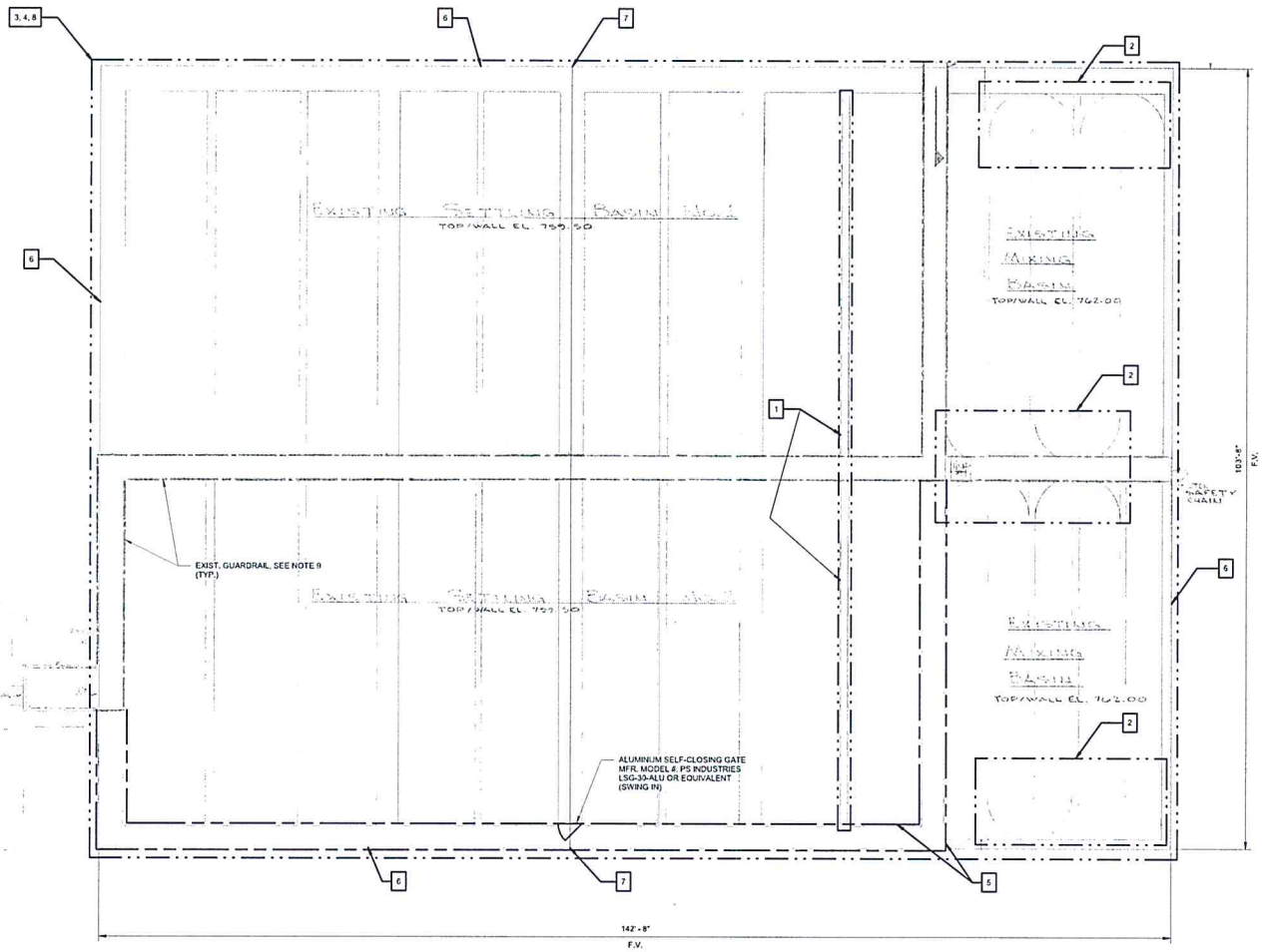

PLAN OF EXISTING SETTLING & MIXING BASINS

SCALE:

1. REPLACE ENTIRE EXIST. WOODEN STILLING WALL W/ FIBERGLASS STILLING WALL. MEMBER SECTIONS AND SPACING SHALL MATCH EXIST. SEE DETAIL 1/23-S301.
2. REPLACE ALL EXIST. ROUNDED GROUT CORNERS. NEW GROUT TO BE REINFORCED w/ FORTA-FERRO SYNTHETIC FIBERS AT A DOSAGE OF 5 LBS/CY.
3. PREPARE AND REPAIR SURFACE DETERIORATED CONCRETE AND REBAR ON THE BASIN WALLS, COLUMNS, AND PORTIONS OF THE FLOOR AS DIRECTED BY ENGINEER (ENTIRE BASIN, UNIT PRICE).
4. REPAIR ALL CORRODED REINFORCING STEEL AS DIRECTED BY ENGINEER (ENTIRE BASIN, UNIT PRICE).
5. NEW ALUM. GUARDRAIL. SEE DETAIL 2/23-S301.
6. PREPARE AND INJECT POLYURETHANE IN ALL WALL CRACKS, INCLUDING ALL CONSTRUCTION JOINTS AS DIRECTED BY ENGINEER (UNIT PRICE).
7. PREPARE AND RESEAL EXPANSION JOINT.
8. FOLLOWING ALL BASIN REPAIRS, APPLY PROTECTIVE EPOXY COATING TO INTERIOR BASIN WALLS AND FLOOR SLAB (ENTIRE BASIN).
9. ALUM. TOE BOARD TO BE ADDED TO ALL EXISTING GUARDRAILS. SEE DETAIL 2/23-S301 FOR TOE BOARD.

GENERAL NOTE: REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION ON REPAIR PROCEDURES AND ACCEPTABLE REPAIR MATERIALS.

PLAN NORTH

1 / 23-S101 **SETTLING BASIN REPAIR PLAN**

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

BARGE DESIGN SOLUTIONS
615 W. Ashley Street, Suite 200 / Norfolk, Nebraska 68701
Phone: 402.644.7000 / Fax: 402.644.8000

GEORGIA REGISTERED No. SEO0050 STRUCTURAL ENGINEER BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04 14:08:14-05'00'

1949 BUILDING - SETTLING BASIN REPAIR PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	BY	CHK	DATE	DESCRIPTION
A	CRH	JRT	4/14/2021	90% SUBMITTAL REVIEW
B	CRH	JRT	05/03/2022	OWNER AND AGENCY REVIEW

23-S101

FILE NO. 3643211

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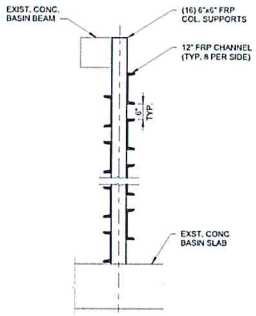
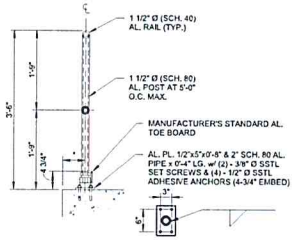


NOTES:

1. ALL DIMENSIONS AND MEMBER QUANTITIES SHALL BE FIELD VERIFIED PRIOR TO FABRICATION. MEMBER PROJECTED AREAS AND SPACING SHALL MATCH EXISTING.
2. ALL MEMBERS SHALL BE FRP AND DESIGNED BY A SPECIALTY CONTRACTOR.
3. ALL CONNECTIONS AND BRACKETS SHALL BE STAINLESS STEEL AND DESIGNED BY A SPECIALTY CONTRACTOR.

1 / 23-S301 STILLING WALL DETAIL

SCALE: 1/2" = 1'-0"



*6" MAX OR CENTERED ON WALL OR CURB

2 / 23-S301 TYPICAL GUARDRAIL ON CONCRETE

SCALE: 3/4" = 1'-0"

BARGE DESIGN SOLUTIONS

GEORGIA REGISTERED No. SE0000560 STRUCTURAL ENGINEER BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04 14:08:31-05'00'

1949 BUILDING - SECTIONS AND DETAILS

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION					
REV	DR.	CHK.	APT.	DATE	DESCRIPTION
A	CBH	JET		05/04/22	ISSUED FOR AGENCY REVIEW

23-S301

FILE NO. 3643211

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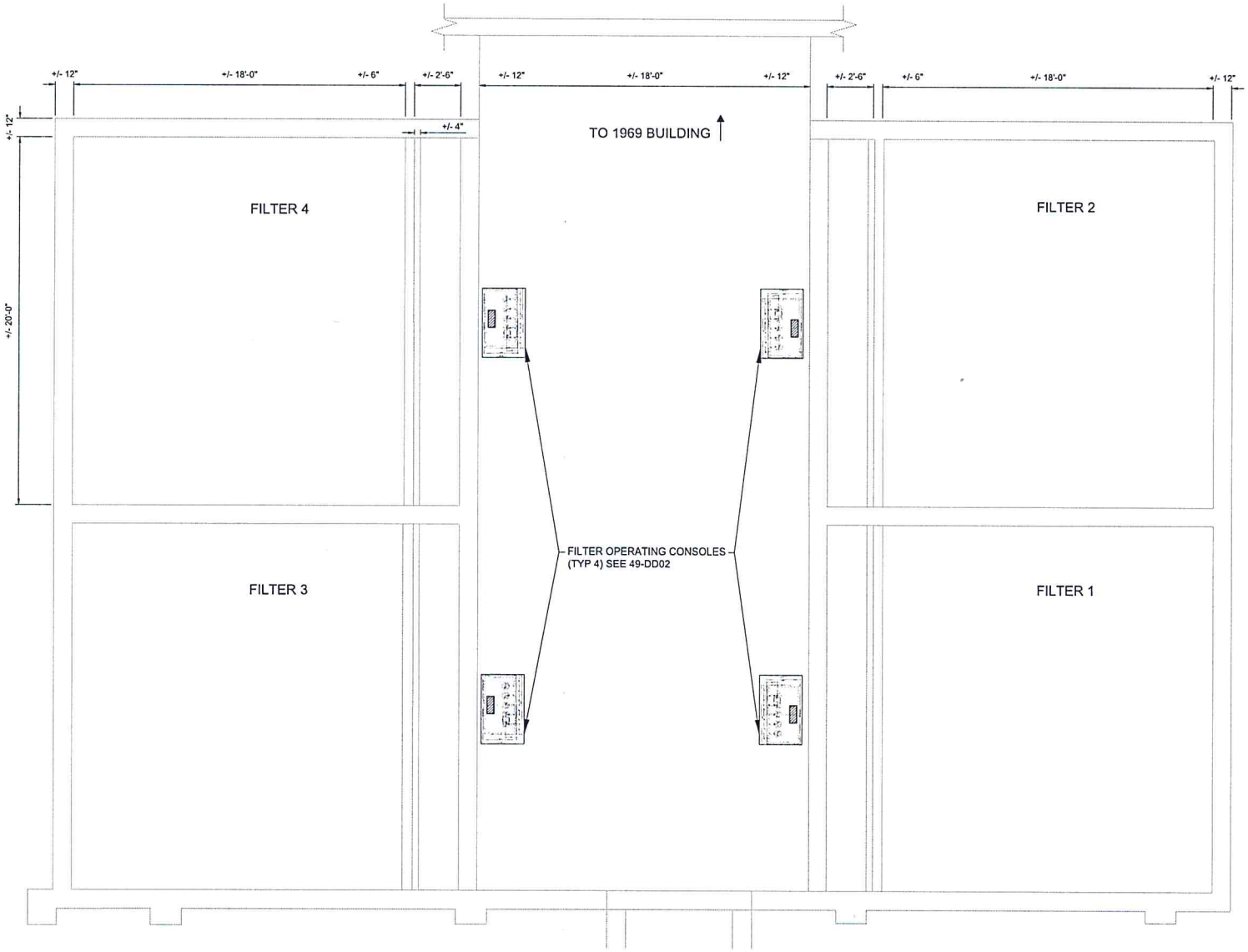
NOTES:

1. OPERATING CONSOLES SHALL BE REHABILITATED, REMOVE INTERNAL COMPONENTS, DIGITAL DISPLAY. PREPARE SURFACES FOR NEW HMI CONTROL PANEL (TYP 4). SEE SHEET 49-E102 AND 95-E701.



FILTER OPERATING CONSOLE - DEMO PLAN
NTS

BARGE DESIGN SOLUTIONS

Digital signed by Michael P Alexander
Date: 2022.05.05 16:56:28-04'00'

1949 BUILDING - FILTER OPERATING CONSOLE OVERVIEW - DEMO PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CK.	REVISION INFORMATION DATE	DESCRIPTION
A	AJS	MA	MAY 2022	30% PLCS FOR SUBMITTAL
B	AJS	MA	05/05/2022	OWNER FEEDBACK INCORP.

49-DD01

FILE NO. 36432-11

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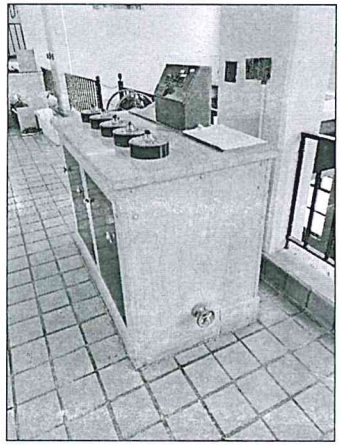
USER:AMPARKER
FILE:F:\36432\36432\11\04_CAD\WATR\36432\11_49-DD01_1949 Filter Operating Console Demo.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

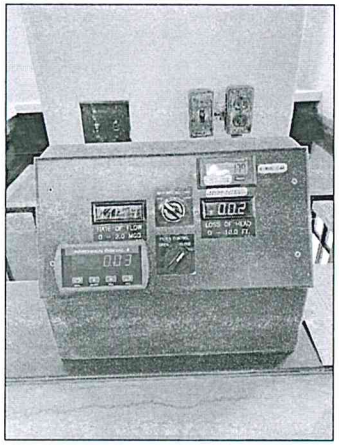
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWING BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.

2. OPERATING CONSOLES SHALL BE REHABILITATED, REMOVE INTERNAL COMPONENTS, DIGITAL DISPLAY. PREPARE SURFACES FOR NEW HMI CONTROL PANEL (TYP 4). SEE SHEET 49-E102 AND 95-E701.

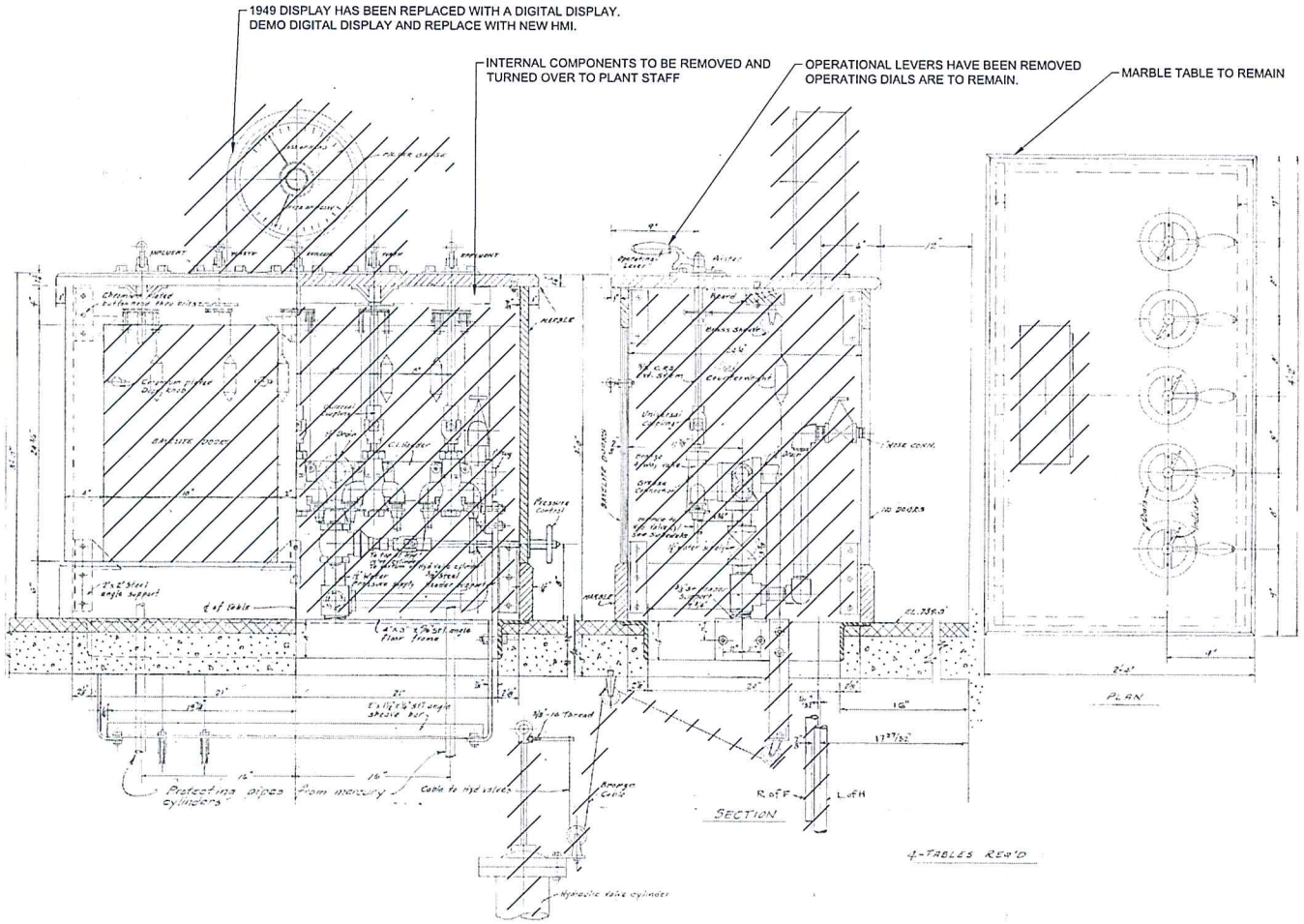


FILTER OPERATING CONSOLE



EXISTING OPERATING CONSOLE

DIGITAL DISPLAY



1 (49-D101) FILTER OPERATING CONSOLE - DEMO

SCALE: 2" = 1'-0"

BARGE DESIGN SOLUTIONS

1201 Front Avenue / Suite F-1 Columbus, GA 31901
PHONE (706) 562-1992

Digitally signed by Michael D. Alexander
Date: 2022.05.05 16:56:38-04'00'

1949 BUILDING - FILTER OPERATING CONSOLE DEMO

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJD	MA	MAY 2022	90% REVIEW SUBMITTAL
B	AJD	MA	MAY 2022	100% REVIEW SUBMITTAL

49-DD02

FILE NO. 36432-11

USER: AMPARKER
FILE F:\36432\36432111\04_CAD\WATER\36432111_49-DD02_1949 Filter Operating Consoles Demo Section.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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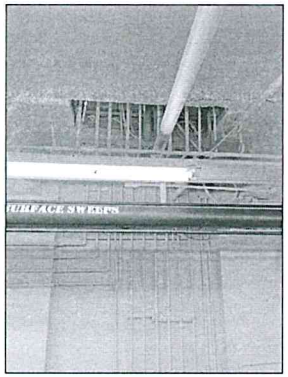
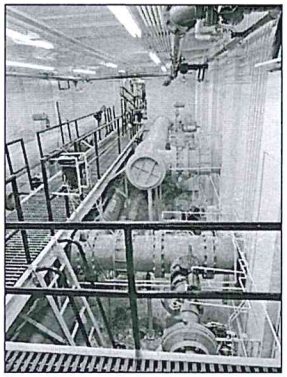
NOTES:

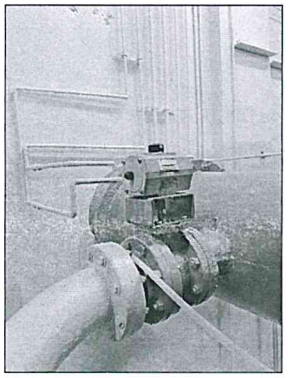
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE FILTER OPERATING CONSOLES TO THE ACTUATORS, INCLUDING SUPPORTS AND HARDWARE.
3. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE MAIN 2" SUPPLY PIPING (PAINTED BLUE) TO THE ACTUATORS. CAP ACTUATOR HYDRAULIC PIPING AT THE ISOLATING VALVE OR TAPPED CONNECTION. THE 2" SUPPLY LINE IS TO REMAIN.
4. REMOVE ALL VALVES IN THE VALVE SCHEDULE AND ASSOCIATED ACTUATORS.
5. REMOVE ALL ACTUATOR HYDRAULIC PIPING WALL SUPPORTS, PATCH AND REPAIR CONCRETE WHERE SUPPORTS ARE REMOVED. RE-COAT PER SPEC SECTION 09 90 15. FINISH COAT COLOR TO MATCH EXISTING.



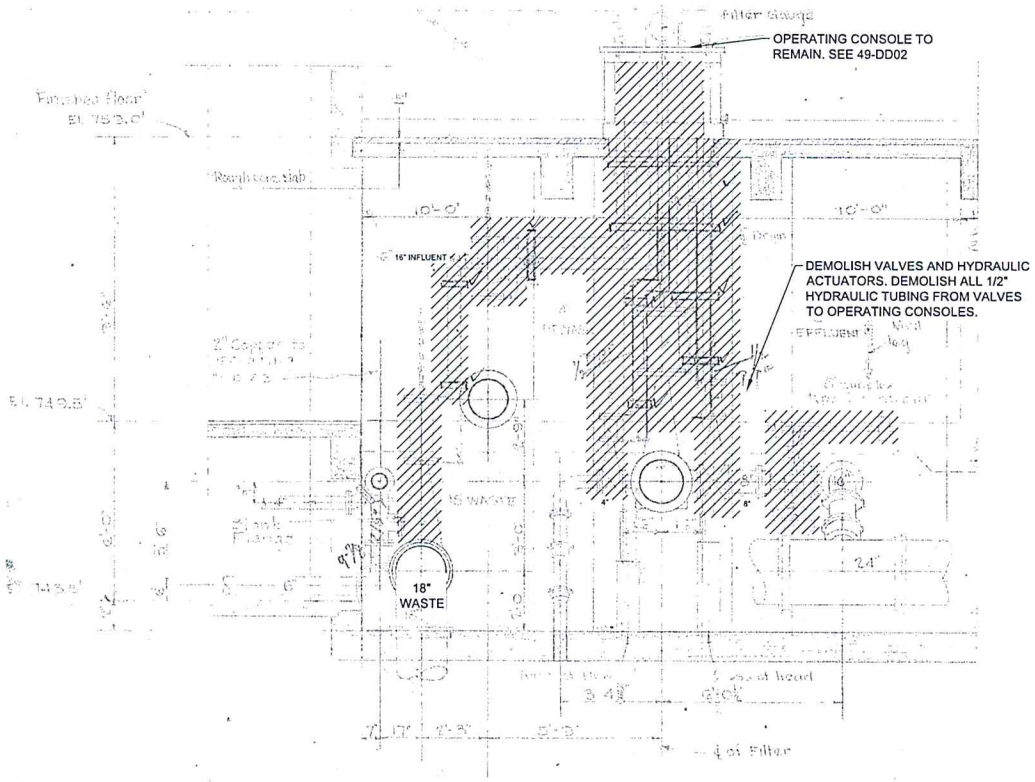
HYDRAULIC ACTUATOR PIPING - ENTERING PIPE GALLERY



PIPE GALLERY HYDRAULIC ACTUATOR PIPING



REWASH HYDRAULIC ACTUATOR, PIPING, AND WALL SUPPORTS



C 49-D101 HYDRAULIC ACTUATOR PIPING DEMO - FILTER GALLERY

SCALE: 1/2" = 1'-0"

0 6" 1' 2' 4'

BARGE DESIGN SOLUTIONS

1227 Frank Lorenz Drive | Cincinnati, OH 45241
PHONE: (513) 33-4500

Digitally signed by Michael S. Alexander
Date: 2022.05.05 15:56:47-04'00'

1949 BUILDING - HYDRAULIC ACTUATOR AND PIPING - DEMO

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV'D/	BY	CHK	DATE	DESCRIPTION
B	AD	MA	04/29/2022	OWNER AND AGENCY REVIEW

49-DD03

FILE NO. 36432-11

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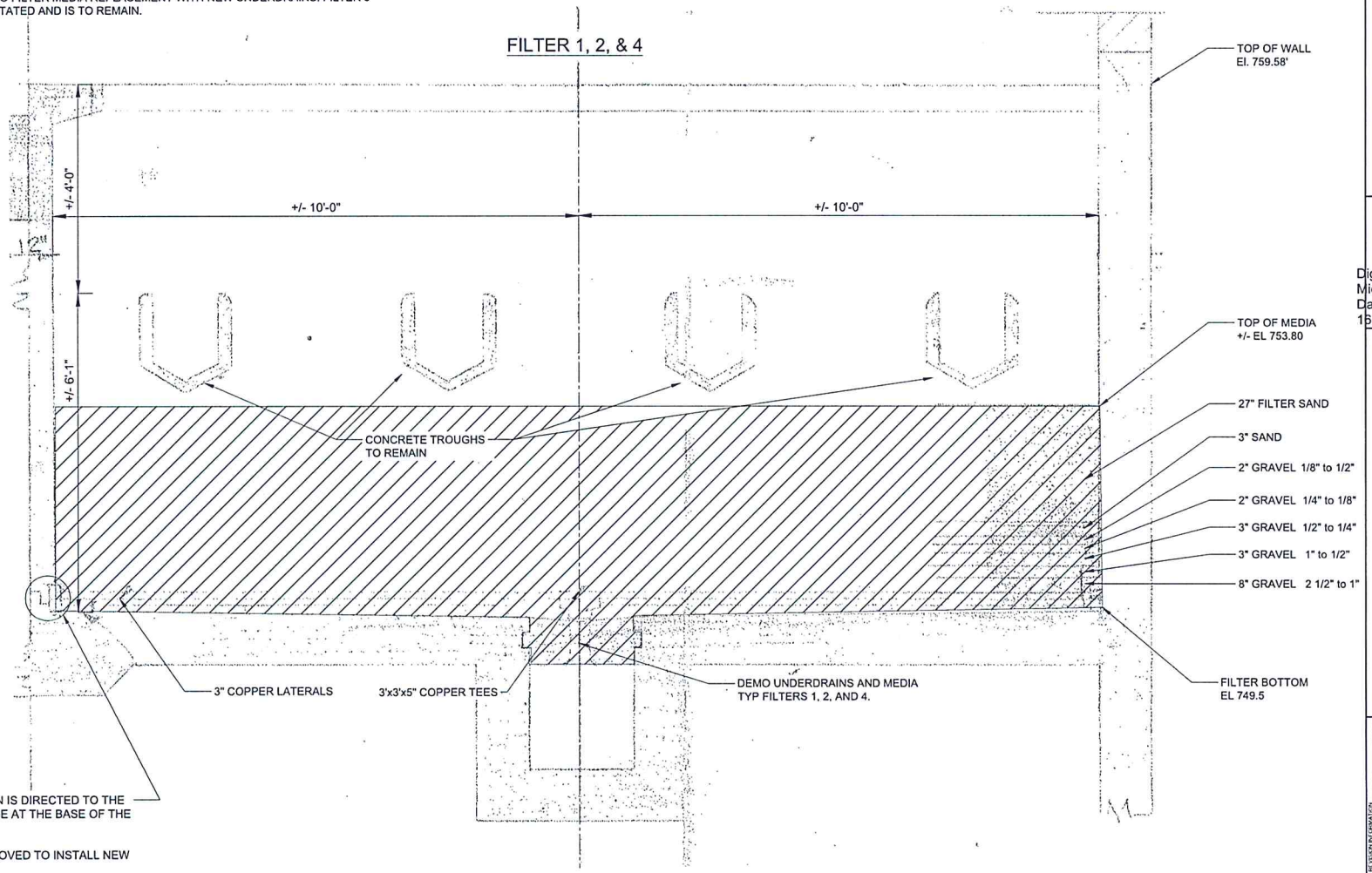
USER:AMPARKER
FILE:F:\36432\36432-11\3_CAD\WATER\36432-11_49-DD03_1949 Hydraulic Piping Demo.dwg
DATE:5-5-2022
PLOTTED:5-5-2022

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS. FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.

FILTER 1, 2, & 4



CONTRACTORS ATTENTION IS DIRECTED TO THE GROUT POCKET AND LEDGE AT THE BASE OF THE FILTER BOX.

THIS LEDGE MUST BE REMOVED TO INSTALL NEW UNDERDRAINS.

LEDGE SHALL BE CUT FLUSH WITH THE FILTER BOX WALL OR GROUT SHALL BE COMPLETELY REMOVED FROM THE POCKET AND NEW GROUT PLACED IN THE POCKET TO BE FLUSH WITH THE FILTER BOX WALL.

D 49-D101 FILTER UNDERDRAIN - DEMO
SCALE: 1" = 1'-0" 0 3" 6" 1' 2'

BARGE DESIGN SOLUTIONS
1201 Peachtree Street NE Atlanta, GA 30361
PHONE: (404) 12-0000

GEORGIA REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Michael J. Alexander
Date: 2022.05.05 15:56:57-04'00'

1949 BUILDING - FILTER UNDERDRAIN - DEMO

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	REVISIONS DESCRIPTION
A	KAHS	MJA	90% REVIEW SUBMITTAL
B	AG	MJA	ISSUED FOR PERMITS

49-DD04

FILE NO. 36432-11

USER: MAYANKGN
FILE: J:\36432\43211\04_CAD\WATER\43211_49-DD04_1949 Filter Underd ain Demo.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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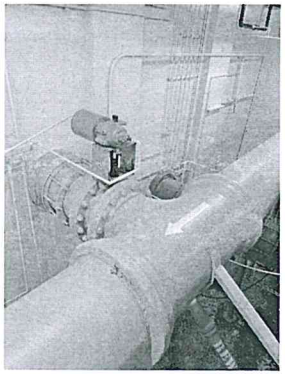
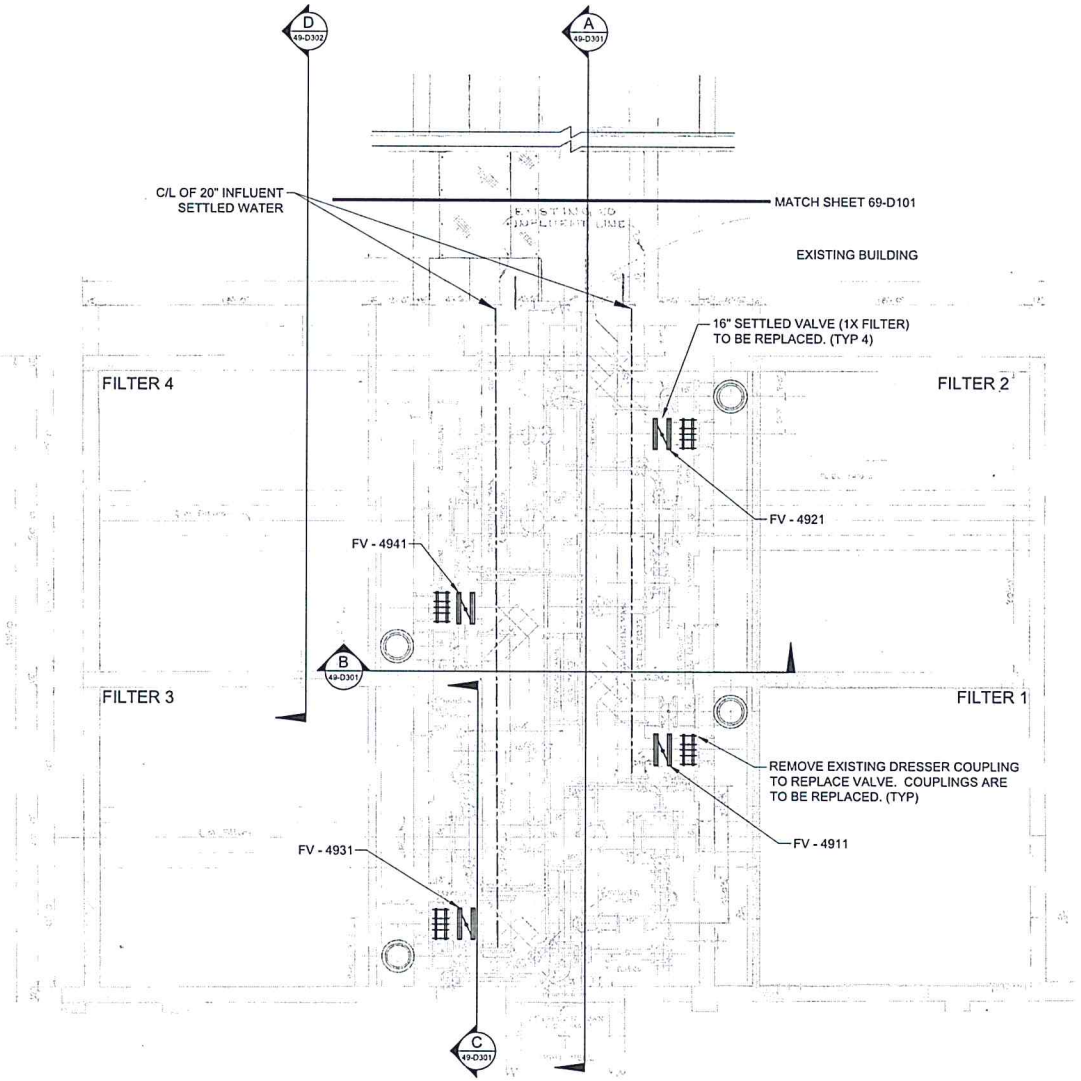
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS WHERE EXISTING EQUIPMENT DISPLAYS DETERIORATION OR CORROSION.
5. SETTLED BUTTERFLY VALVE (4X) AND EXISTING DRESSER COUPLING (4X) ARE TO BE REPLACED.
6. PROVIDE NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



16" SETTLED VALVE



SETTLED VALVE REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

1201 Front Avenue / Suite # 2 Columbus, GA 31901
PHONE (706) 324-4820

Digitally signed by Michael L. Alexander
Date: 2022.05.05 16:55:12-04'00'

1949 BUILDING - SETTLED VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	REVISION REFERENCE	DATE	DESCRIPTION
A	AGS	MA		MAY 2022	50% REVIEW SUBMITTAL
B	AGS	MA		MAY 2022	90% REVIEW SUBMITTAL

49-D101

FILE NO. 36432-11

USER: AMPARKER
FILE: F:\36432\36432110\4_CAD\WATER\36432110_49-D101_1949 Settled Valve Replacement Plan.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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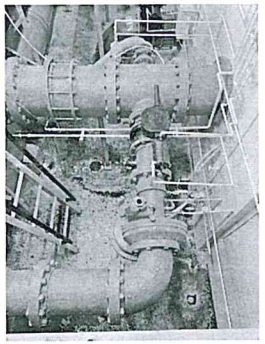
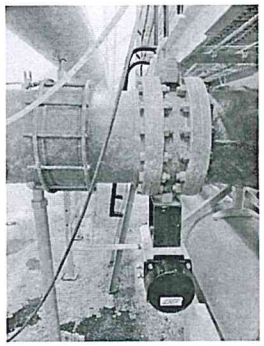
NOTES:

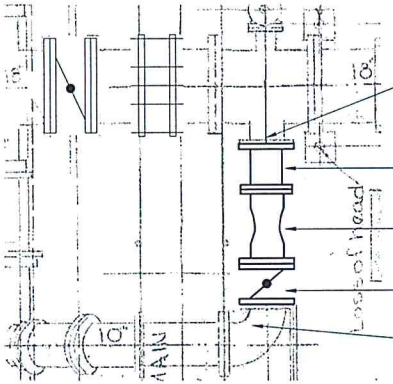
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION AND REPLACE PIPE SUPPORTS AND ANCHOR BOLTS WHERE EXISTING EQUIPMENT DISPLAYS EXCESSIVE DETERIORATION OR CORROSION.
4. EXISTING FILTERED BUTTERFLY VALVE, SPOOL, VENTURI AND SIMPLEX TYPE S CONTROLLER (4X) ARE TO BE REMOVED.
5. NEW FILTERED BUTTERFLY VALVE (4X) AND VENTURI (4X) ARE TO BE INSTALLED. SEE DETAIL 1 ON THIS SHEET.
6. BACKWASH (WASH) BUTTERFLY VALVES (4X) AND DRESSER COUPLINGS (4X) ARE TO BE REPLACED.
7. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, FITTING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



8" FILTERED VALVE, VENTURI & CONTROLLER

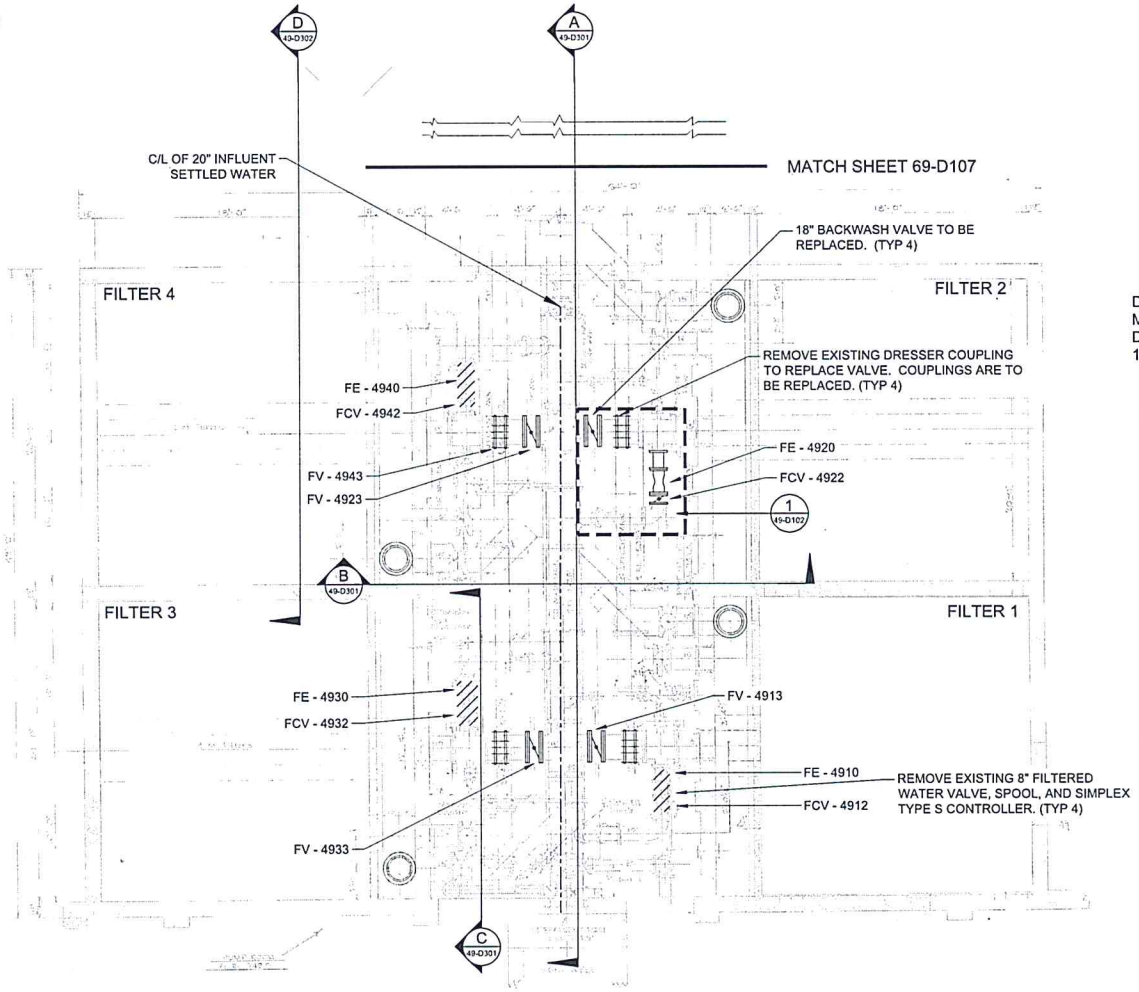


18" BACKWASH VALVE



1 (49-D102) ROF CONTROLLER DETAIL TYP 4

SCALE: 3/4" = 1'-0"



FILTERED VALVE & BACKWASH VALVE REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

1211 East Kennedy Street / Columbus, GA 31901
PHONE (706) 323-6510

REGISTERED PROFESSIONAL ENGINEER GEORGIA

Digitally signed by Michael S. Alexander
Date: 2022.05.05 16:55:21-04'00'

1949 BUILDING - FILTERED VALVE & BACKWASH VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR.	CHK.	DATE	DESCRIPTION
A	AED	MA	05/05/2022	OWNER REVIEW SUBMITTAL
B	AED	MA	05/05/2022	OWNER REVIEW SUBMITTAL

49-D102

FILE NO. 36432-11

USER:AMARKER
FILE:F:\36\36432\36432110_CAD\WATER\36432\1_49-D102_1949 Filtered Valve Replacement Plan.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

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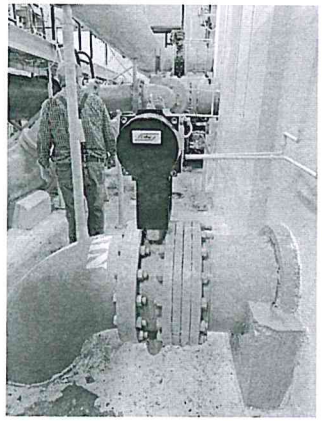
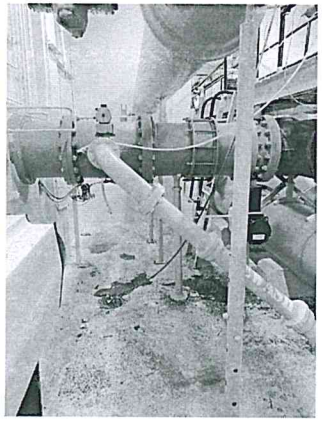
NOTES:

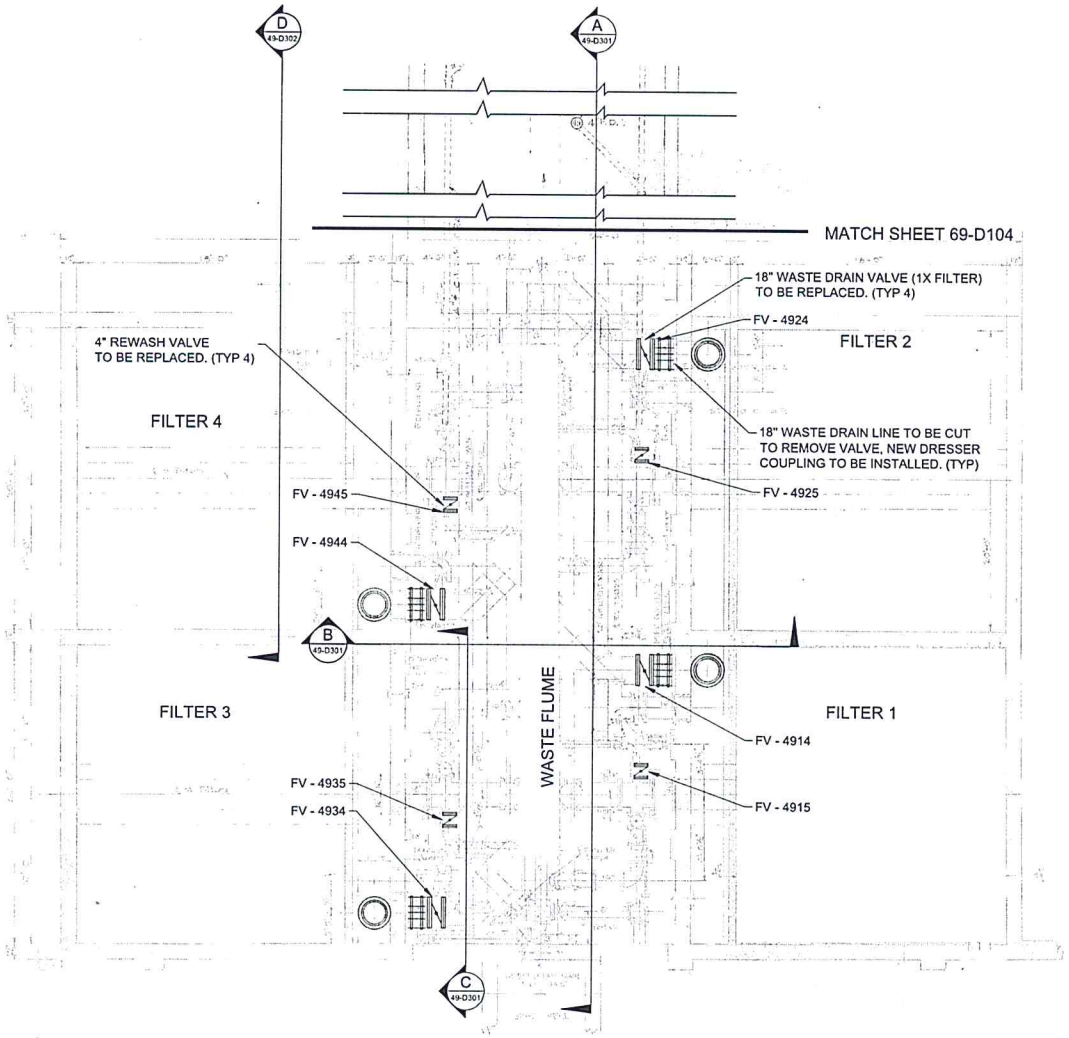
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION AND REPLACE PIPE SUPPORTS AND ANCHOR BOLTS WHERE EXISTING EQUIPMENT DISPLAYS EXCESSIVE DETERIORATION OR CORROSION.
4. WASTE DRAIN BUTTERFLY VALVE (4X) ARE TO BE REPLACED.
5. REWASH BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
6. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



18" WASTE DRAIN VALVE



4" REWASH VALVE



WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN
NTS

BARGE DESIGN SOLUTIONS
1201 First Avenue P.Suite F | Columbus, GA 31901
Phone: (706) 327-0580

Digitally signed by Michael D Alexander
Date: 2022.05.05 16:55:30-04'00'

1949 BUILDING - WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	ENG.	CHK.	DATE	DESCRIPTION
A	MAD	MA	04/01/2022	90% CONSTRUCTION SUBMITTAL
B	AJD	MA	04/01/2022	OWNER AND AGENCY REVIEW

49-D103

FILE NO. 36432-11

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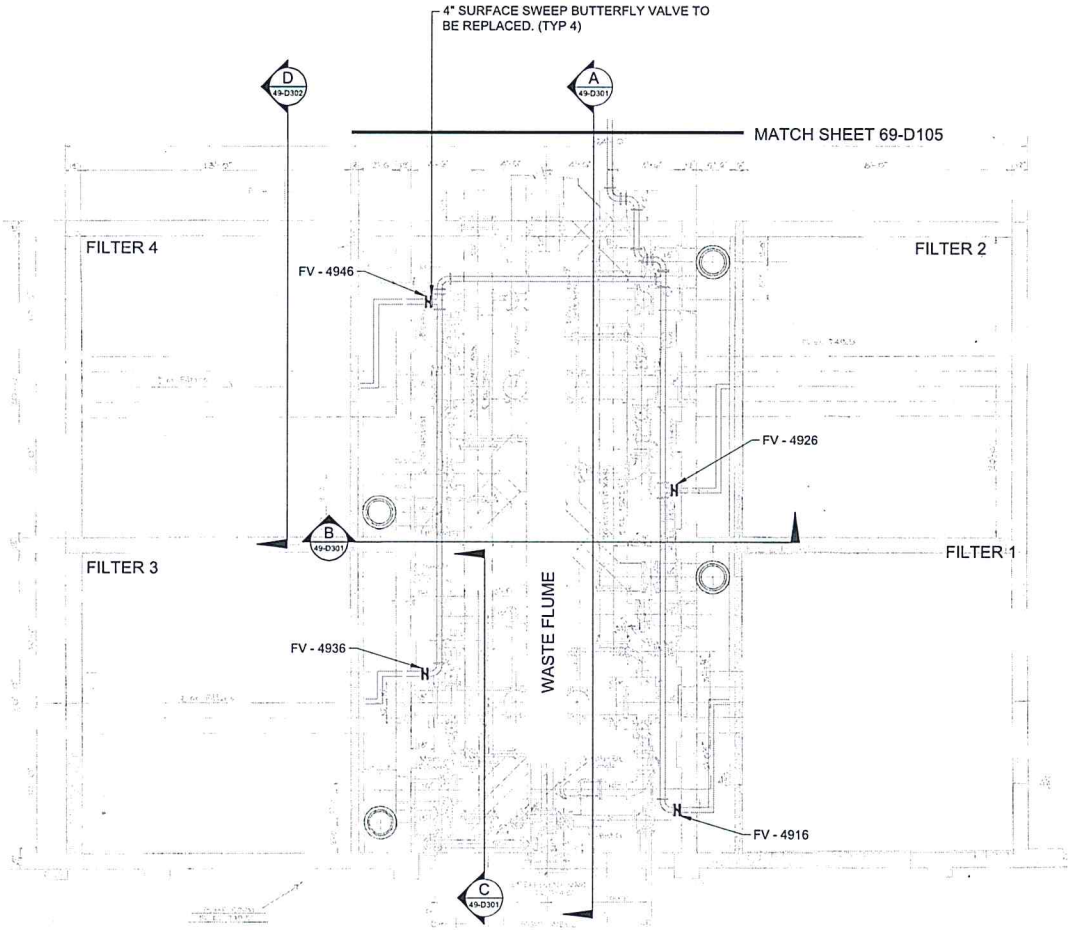
USER:AJPARKER
FILE:F:\36432\36432\11\36_CAD\WATER\36432\11_49-D103_1949 Waste (Drain) Valve Replacement Plan.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

NOTES:

1. BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. SURFACE SWEEP BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
3. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.

4" SURFACE SWEEP VALVE



SURFACE SWEEP VALVE REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

1201 First Avenue S Suite F | Columbus, GA 31901
PHONE (706) 324-4592

GEORGIA REGISTERED PROFESSIONAL ENGINEER 23355 MICHAEL D. ALEXANDER

Digitally signed by Michael D Alexander
Date: 2022.05.05 16:55:40-04'00'

1949 BUILDING - SURFACE SWEEP VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	INIT.	DATE	REVISIONS/DESCRIPTION
A	AJG	MAY 2022	50% REVIEW SUBMITTAL
B	AJG	MAY 2022	OWNER AND AGENCY REVIEW

49-D104

FILE NO. 36432-11

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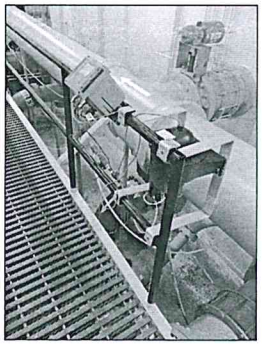
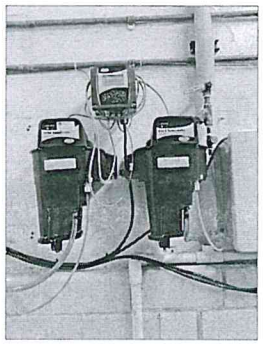
USER: AAPARKER
FILE: P:\36432\36432-11\01_CAD\WATER\36432-11 49-D104_1949 Surface Sweep Valve Replacement Plan.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

NOTES:

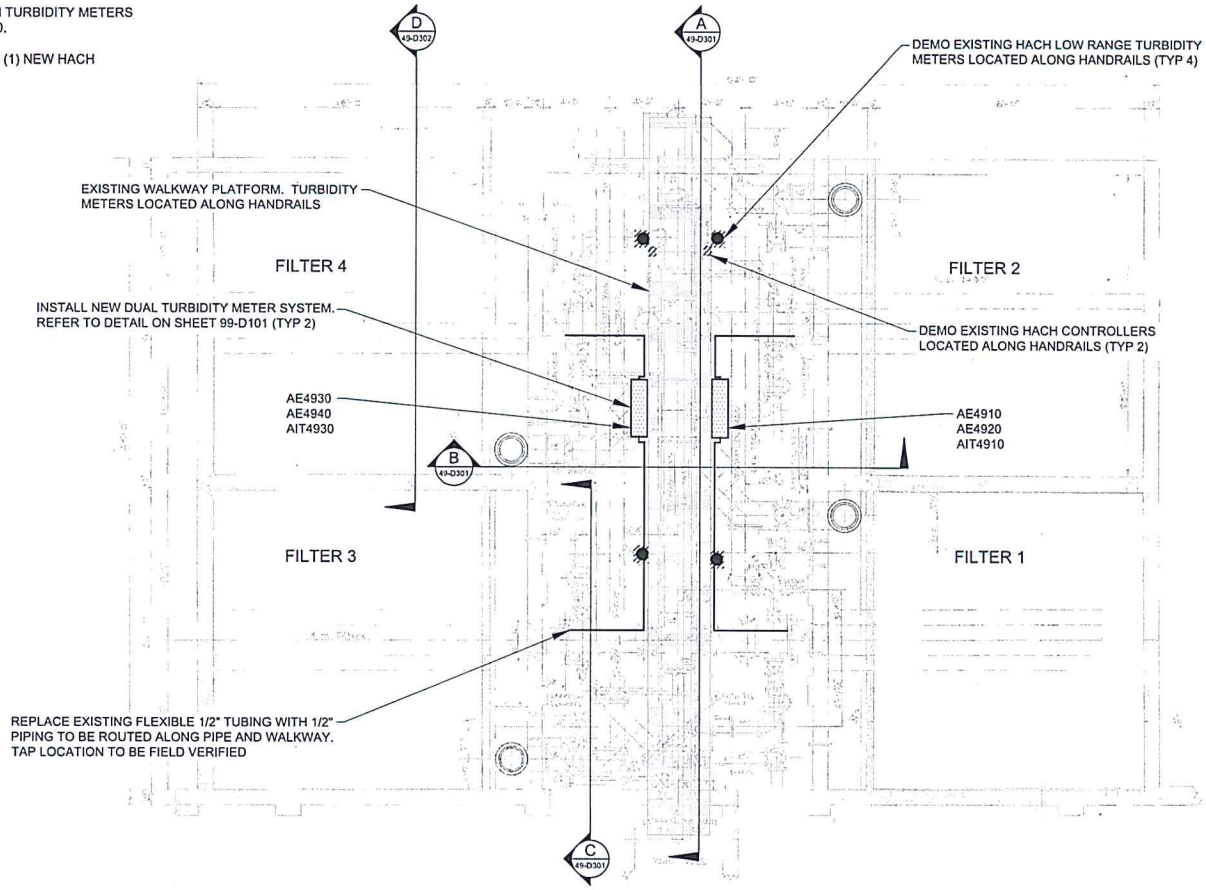
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. IN THE PIPE GALLERY REMOVE FOUR (4) EXISTING HACH TURBIDITY METERS MODEL 1720E, TWO (2) HACH CONTROLLERS MODEL SC200, AND ALL HARDWARE. INSTALL FOUR (4) NEW HACH TURBIDITY METERS MODEL TU5300SC AND TWO (2) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.
3. IN THE HIGH SERVICE SAMPLING ROOM REMOVE THE HS-4/5 AND HS-6 HACH TURBIDITY METERS MODEL 1720E AND THE CORRESPONDING HACH CONTROLLER MODEL SC200.
4. INSTALL TWO (2) NEW HACH TURBIDITY METERS MODEL TU5300SC AND ONE (1) NEW HACH CONTROLLER MODEL SC4500 PROVIDED BY OWNER.



PIPE GALLERY - TURBIDITY METER & CONTROLLER



HIGH SERVICE SAMPLE ROOM - TURBIDITY METERS HS-4/5 AND HS-6 AND CONTROLLER



TURBIDITY SYSTEM REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

1201 Front Avenue S.W. Suite F | Columbus, GA 31901
PHONE (706) 323-9492

Digitally signed by Michael P. Alexander
Date: 2022.05.05 16:55:49-04'00'

1949 BUILDING - TURBIDITY SYSTEM REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISIONS / COMMENTS			
REV	DR.	CHK.	DATE
A	MJB	MA	MAY 2021
B	JCD	MA	DEC 2021

DESCRIPTION
30% REVIEW SUBMITTAL
CONSTRUCTION SET

49-D105

FILE NO. 36432-11

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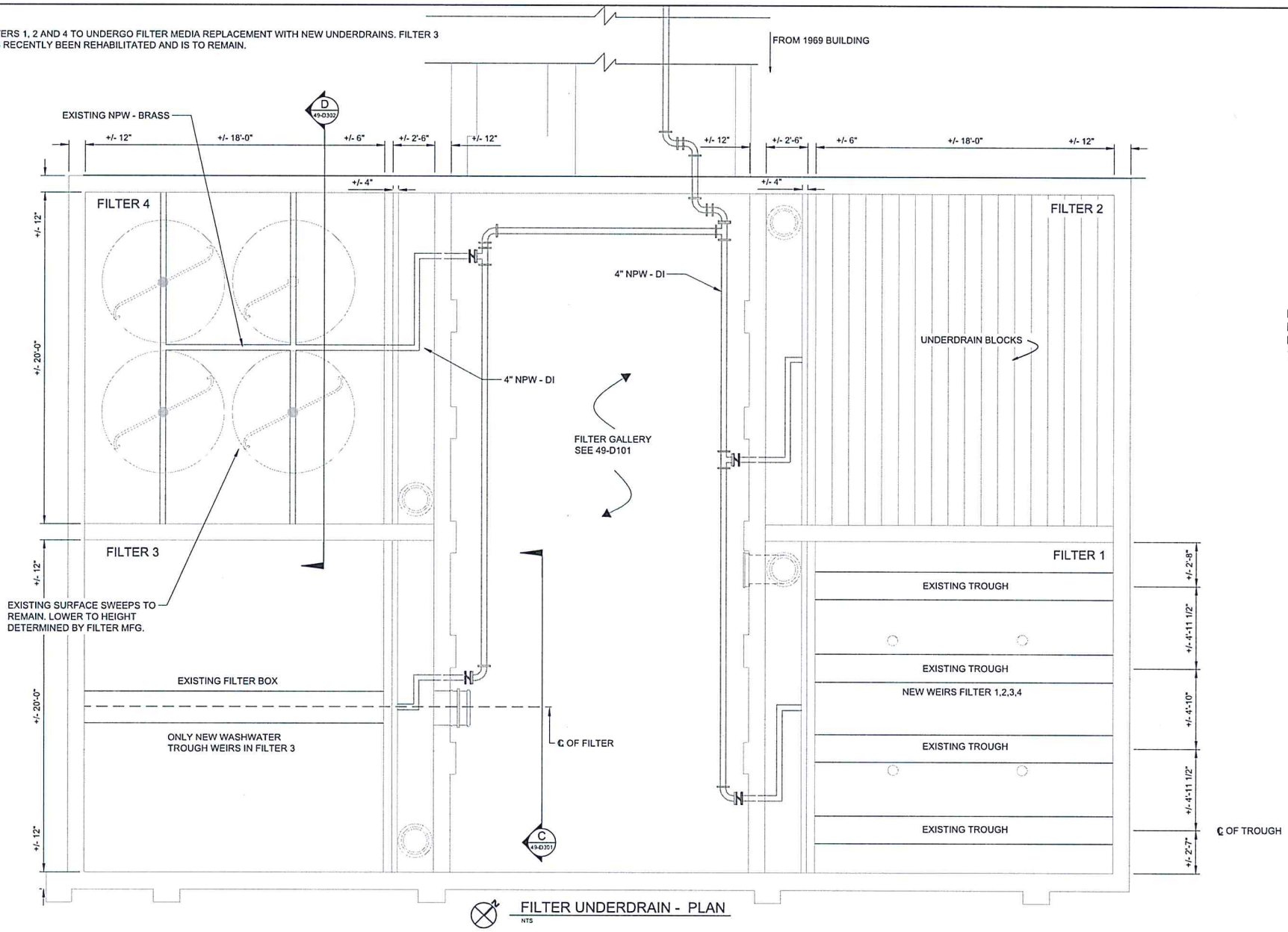
USER: AMPARKER
FILE: J:\36432\36432110A_CAD\WATR\36432\1_49-D105_1949 Turbidity System Replacement Plan.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

NOTES:

1. FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS. FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.



FILTER UNDERDRAIN - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael L. Alexander
Date: 2022.05.05 15:55:59-04'00'

1949 BUILDING - FILTER UNDERDRAIN - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DWN.	CHK.	DATE	DESCRIPTION
A	AJD	MA	04/15/2022	90% SUBMITTAL
B	AJD	MA	05/02/2022	OWNER AND AGENCY REVIEW

49-D106

FILE NO. 36432-11

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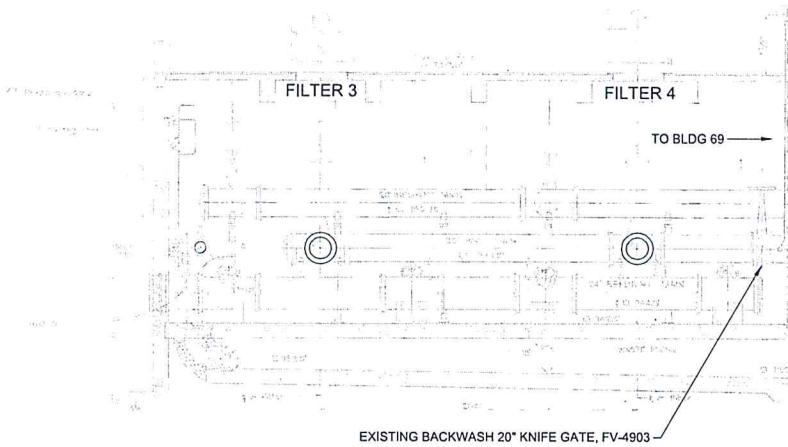
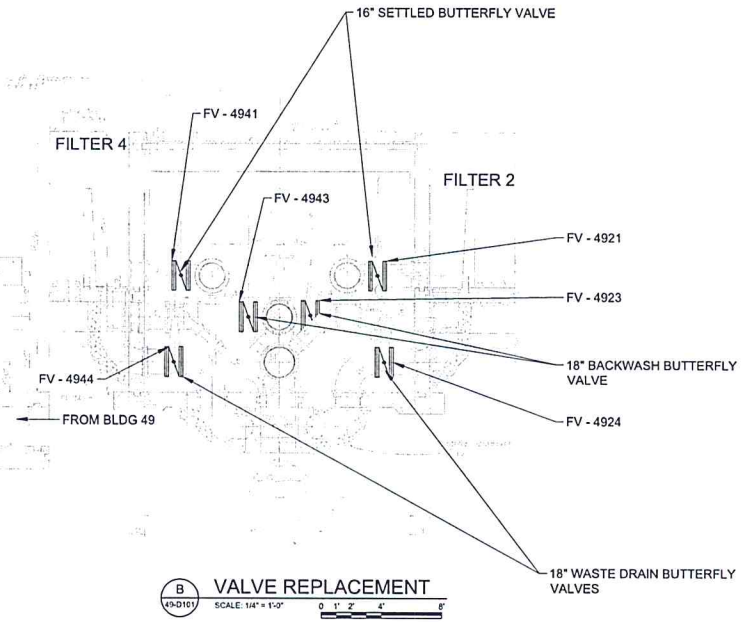
USER:AMPARKER
FILE:C:\36432\36432\11\04_CAD\WX\F36432\11_49-D106_1949 Filter Underdrain Plan.dwg
PLOTTED:5/2/2022
PLOTTED:5/2/2022

NOTES:

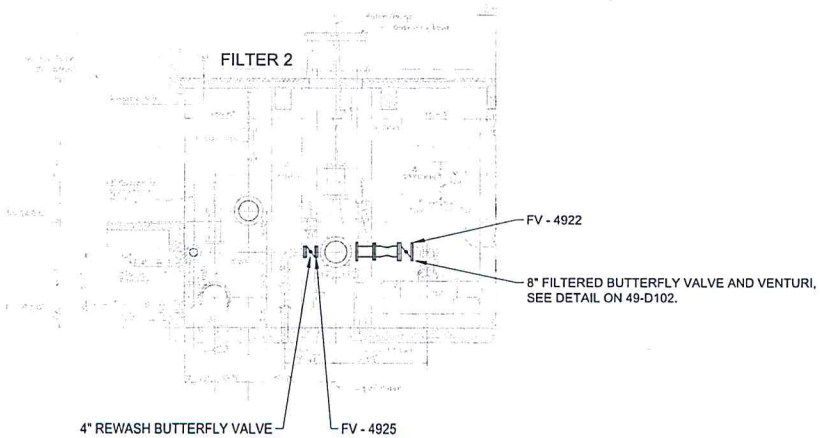
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DRAWING DOES NOT INCLUDE SURFACE SWEEP PIPING AND VALVES. SEE SHEET 49-D104.
3. 1949 RECORD DRAWINGS SHOW GATE VALVES AND STEMS WHERE EXISTING BUTTERFLY VALVES HAVE BEEN INSTALLED.



A 49-D101 VALVE REPLACEMENT
SCALE: 1/4" = 1'-0"



B 49-D101 VALVE REPLACEMENT
SCALE: 1/4" = 1'-0"



C 49-D101 VALVE REPLACEMENT
SCALE: 1/4" = 1'-0"

BARGE DESIGN SOLUTIONS

Digital signature by Michael C Alexander
Date: 2022.05.05 16:56:08-04'00'

1949 BUILDING - FILTERS & PIPE GALLERY
VALVE REPLACEMENT - SECTIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISIONS				
REV	DR.	CHK.	DATE	DESCRIPTION
A	AJG	MA	MAY 2021	30% REVIEW SUBMITTAL
B	AJG	MA	05/05/2022	100% PROJECT REVIEW

49-D301

FILE NO. 36432-11

USER: AMPARKER
FILE: F:\36432\36432\11\04_CAD\WATR\36432-11_49-D301_1949 Valve Replacement Sections.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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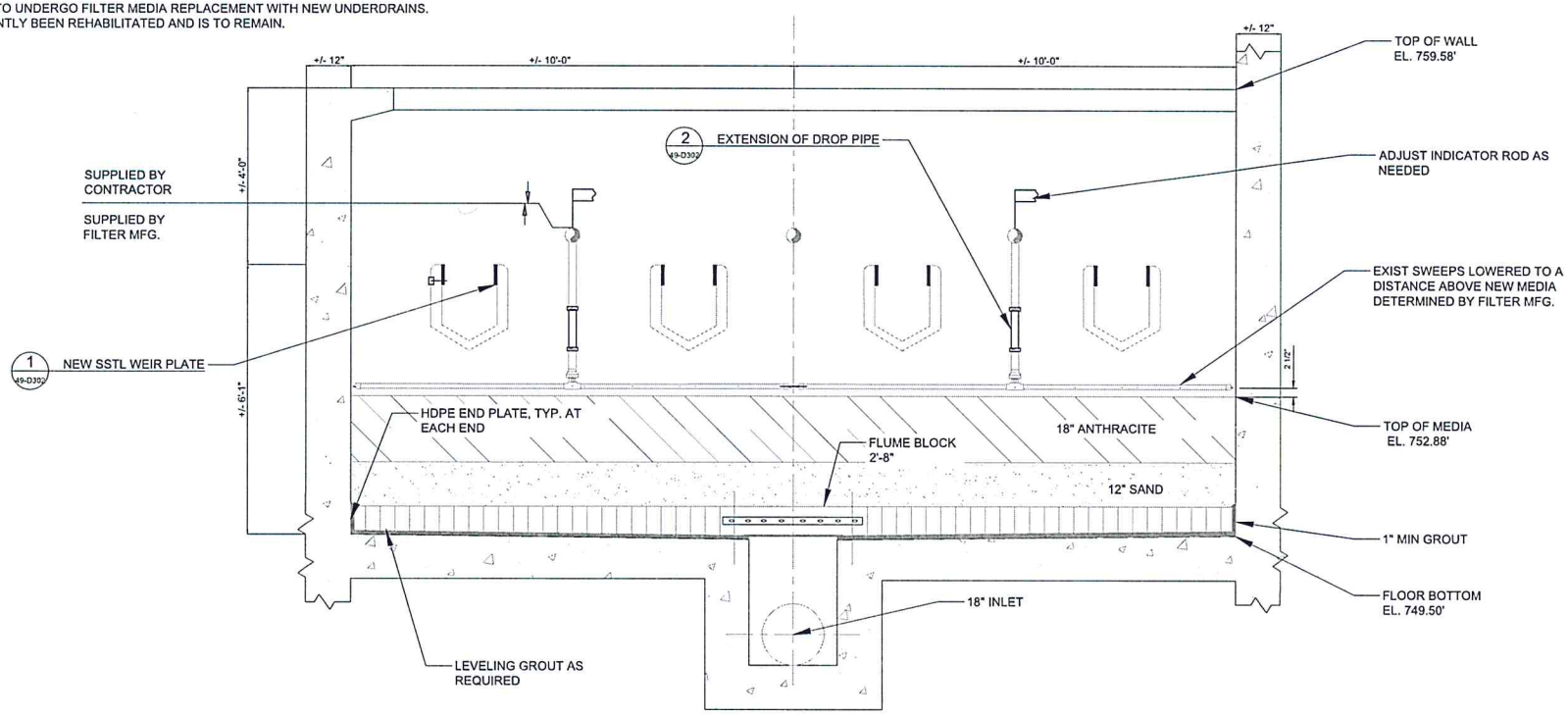
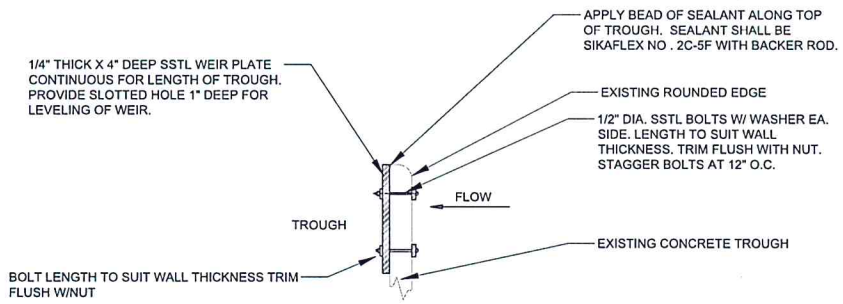
NOTES:

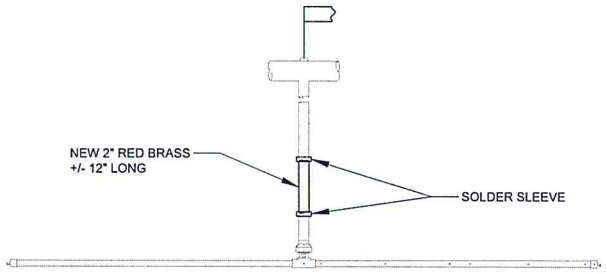
1. FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS. FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.



D
49-D106
FILTER UNDERDRAIN SYSTEM - SECTION
SCALE: 3/4" = 1'-0"
0 6" 1' 2'



1
49-D302
WEIR PLATE MOUNTING DETAIL
NTS



2
49-D302
FILTER SWEEP - SECTION
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael J. Alexander
Date: 2022.05.05 16:56:19-04'00'

1949 BUILDING - FILTERS UNDERDRAIN SYSTEM - SECTION

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION INFORMATION			
REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJS	MA	MAY 2021	30% REVIEW SUBMITTAL
B	AJS	MA	05/05/2022	100% REVIEW SUBMITTAL

49-D302

FILE NO. 36432-11

USER: AMPARKER
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SAVED: 5/5/2022
PLOTTED: 5/5/2022

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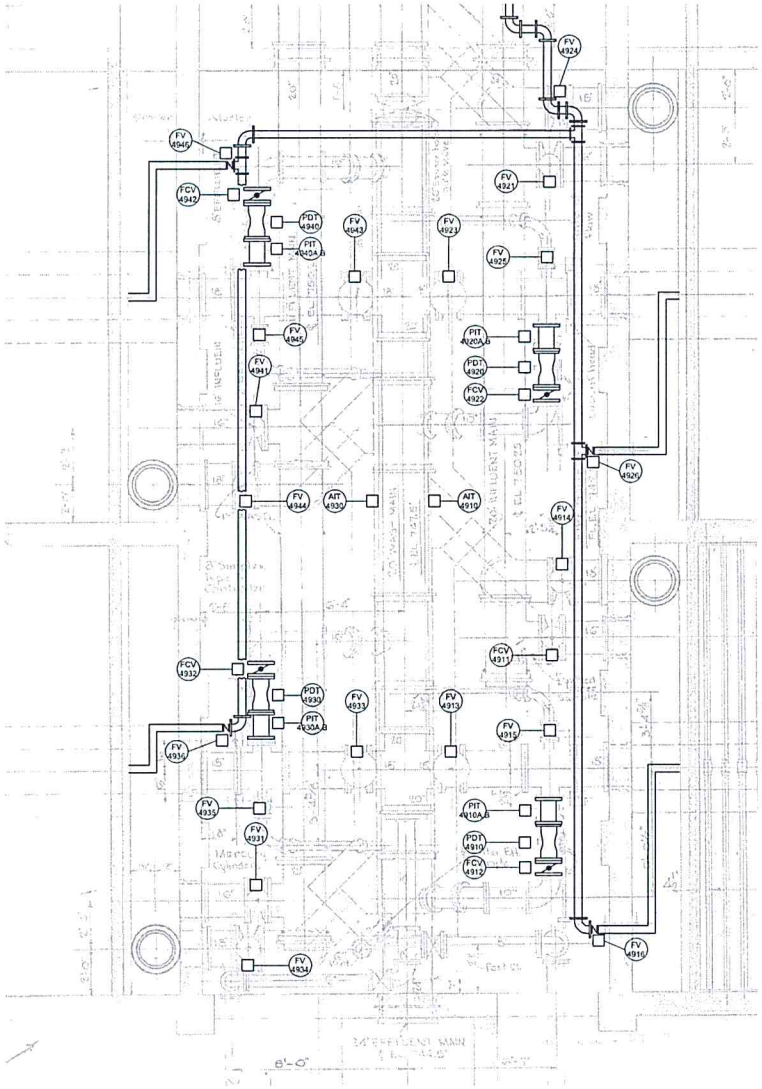


PLAN NORTH

1 49-E101 **PIPE GALLERY (ORIGINAL BLDG.) - ELECTRICAL PLAN**

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

GENERAL NOTES

A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

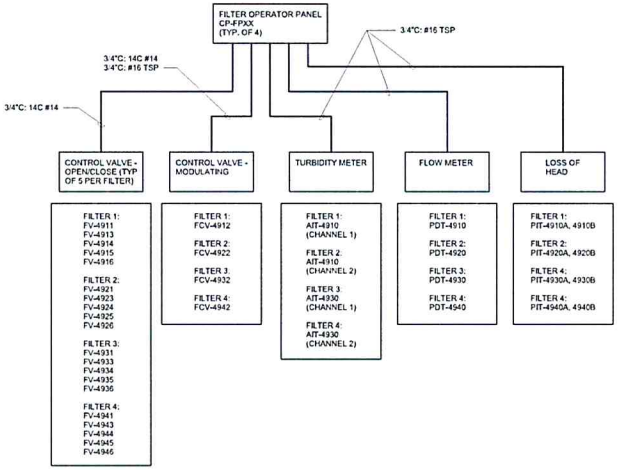
B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FAR/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR ON BACK WALL OR ON CENTER AT RAILING. PROVIDE 3 FT MIN CLEARANCE.

C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

D. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.

E. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.

F. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.



2 49-E101 **TYPICAL CONTROL WIRING DIAGRAM #1**

NTS

BARGE DESIGN SOLUTIONS

Brian W Landp

GEORGIA REGISTERED No. PE046693 PROFESSIONAL ENGINEER BRIAN WILLIAM LANDP

1949 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	DR.	ENG.	DATE	DESCRIPTION
A	CSH	BL	MAY '21	30% REVIEW SUBMITTAL
B	CSH	BL	06/07/2021	OWNER AND AGENCY REVIEW

49-E101

FILE NO. 3643211

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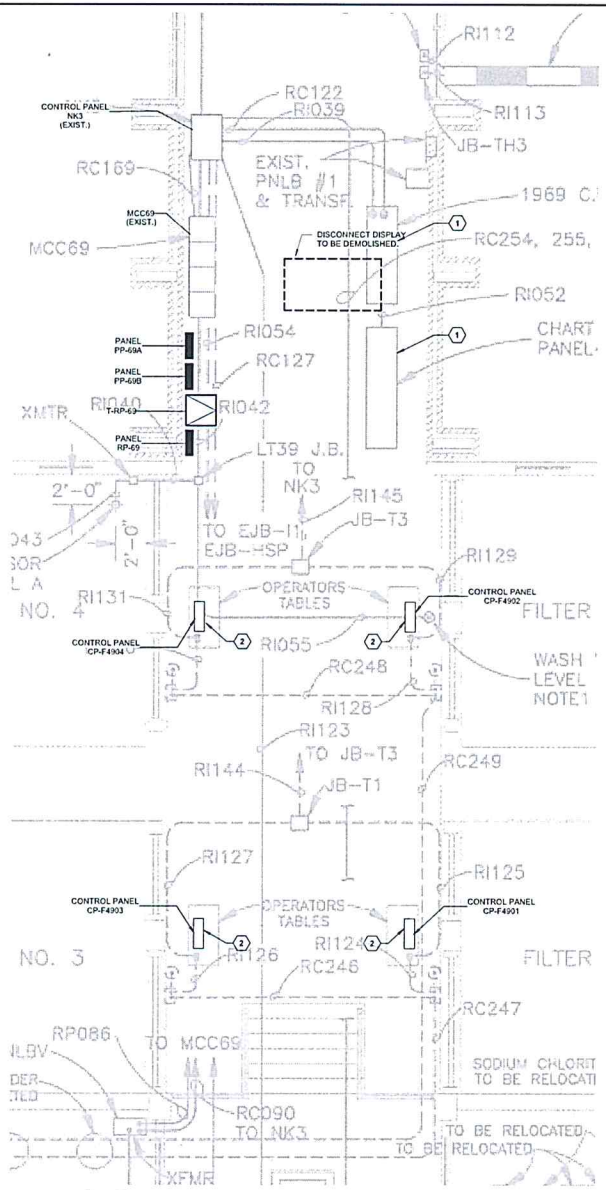

1 (49-E102) **1949 BLDG - OPERATORS FLOOR - ELETRICAL PLAN**

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

GENERAL NOTES

A. OPERATING FLOOR SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

KEYED NOTES

1. REMOVE EXISTING ABANDONED ELECTRICAL ENCLOSURE. CUT CONDUITS FLUSH WITH FLOOR AND SEAL FLOOR PENETRATIONS.

2. PROVIDE ENCLOSURE WITH OPERATOR INTERFACE PANEL (OIT) ON EXISTING 1949 CONTROL ENCLOSURES. PROVIDE PLC IN EXISTING ENCLOSURE. PROVIDE 15" HMI SCREEN IN ENCLOSURE MOUNTED ON TOP OF CONSOLE. PROVIDE 20A CIRCUIT FROM RP-69 USING 3/4"C: 2-#10 W/ #10 GND. PROVIDE 500VA UPS IN ENCLOSURE.

BARGE DESIGN SOLUTIONS

Brian W Landr

1949 BUILDING - OPERATORS FLOOR - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	DR.	CHK.	DATE	DESCRIPTION
A	DR	BL	04/27/22	75% REVIEW SUBMITTAL
B	CRM	BL	05/02/22	OWNER AND AGENCY REVIEW

49-E102

FILE NO. 3643211

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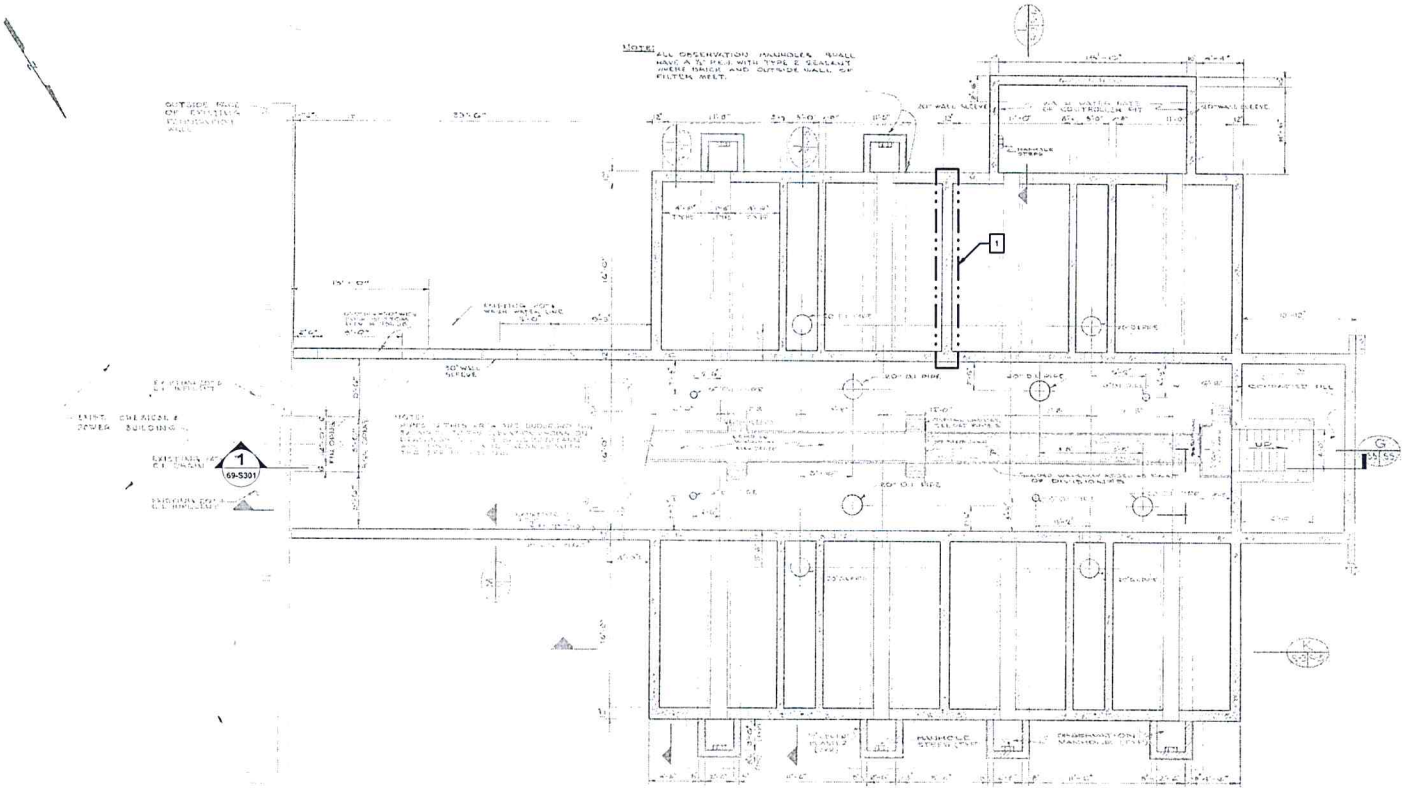
1 PREPARE AND INJECT POLYURETHANE IN ALL WALL CRACKS, INCLUDING ALL CONSTRUCTION JOINTS AS DIRECTED BY ENGINEER (UNIT PRICE).



PLAN AT BOTTOM OF FILTERS
SCALE

NOTE: SEE PLATE S-5 FOR REINFORCEMENT.

PLAN NORTH

1 / 69-S101 **FILTER WALKWAY PLAN**

SCALE: 3" = 1'-0"

BARGE DESIGN SOLUTIONS
615 W Peachtree Street | Suite 1000 | Atlanta, Georgia 30313
Phone: 678-904-1000 | FAX: 678-904-1002

GEORGIA REGISTERED STRUCTURAL ENGINEER No. SE0000560 BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04
14:08:48-05'00'

1969 BUILDING - FILTER WALKWAY PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CRH	JRT	4/11/2022	90% SUBMITTAL REVIEW
B	CRH	JRT	5/4/2022	OWNER AND AGENCY REVIEW

69-S101

FILE NO. 3643211

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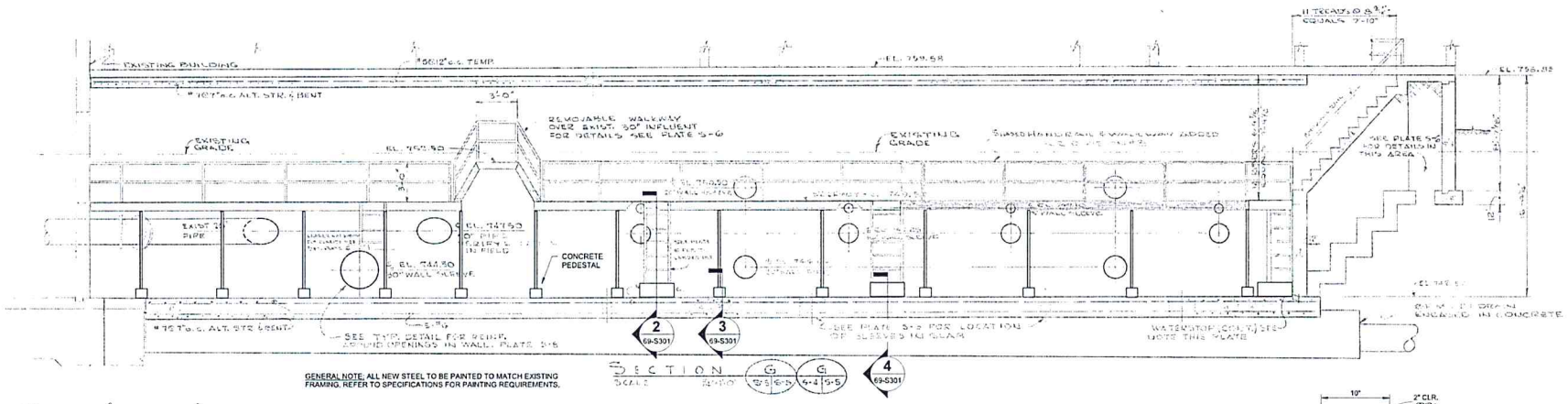
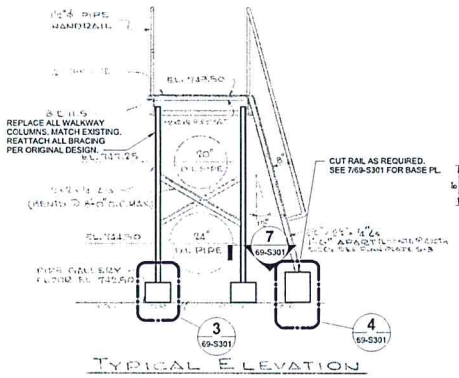
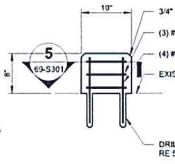


GENERAL NOTE: ALL NEW STEEL TO BE PAINTED TO MATCH EXISTING FRAMING. REFER TO SPECIFICATIONS FOR PAINTING REQUIREMENTS.

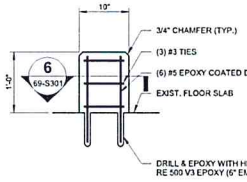
1 69-S101 ELEVATION
SCALE: 1/4" = 1'-0"



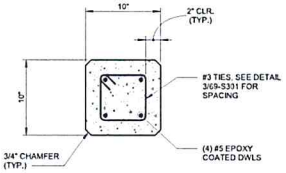
2 69-S301 SECTION
SCALE: 1/2" = 1'-0"



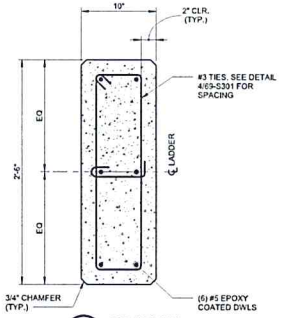
3 69-S301 DETAIL
SCALE: 1" = 1'-0"



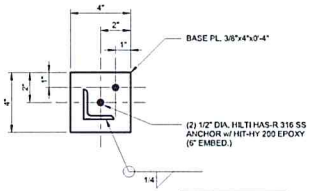
4 69-S301 DETAIL
SCALE: 1" = 1'-0"



5 69-S301 SECTION
SCALE: 1 1/2" = 1'-0"

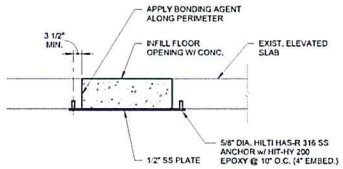


6 69-S301 SECTION
SCALE: 1 1/2" = 1'-0"



NOTE:
BASE PLATE FOR POST AND LADDER RAIL

7 69-S301 TYPICAL BASE PLATE DETAIL
SCALE: 3" = 1'-0"



NOTE:
PLATE MUST BE ANCHORED w/ MANUF. RECOMMENDED SET TIME PRIOR TO PLACEMENT OF CONCRETE.

8 69-S301 TYP. FLOOR OPENING REPAIR DETAIL
SCALE: 1/2" = 1'-0"

BARGE DESIGN SOLUTIONS

GEORGIA REGISTERED No. 56000550 STRUCTURAL ENGINEER BRIAN H. WOOD

Digitally signed by Brian H Wood
Date: 2022.05.04 14:08:22-05'00'

1969 BUILDING - SECTIONS AND DETAILS

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	GRH	JRT	5/13/2022	90% SUBMITTAL REVIEW
B	GRH	JRT	05/02/2022	OWNER AND AGENCY REVIEW

69-S301

FILE NO. 3643211

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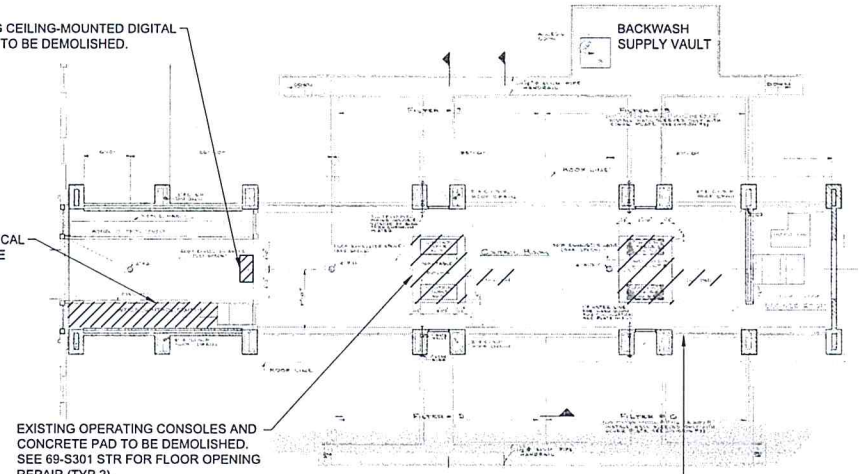
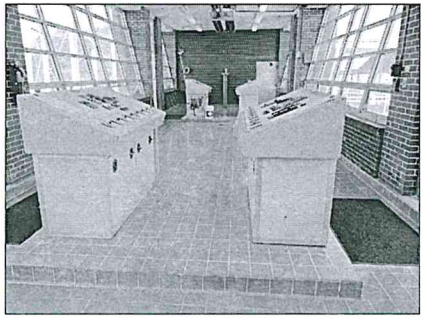
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DEMO ALL FILTER OPERATING CONSOLES AND CURBS (4X.) CONCRETE PLATFORM TO BE REMOVED FLUSH WITH EXISTING CONCRETE FLOOR SLAB. NO PNEUMATIC OR VIBRATING DEVICES ALLOWED FOR DEMO OF CONCRETE CURBS.
3. DEMO TWO (2) EXISTING EMPTY ELECTRICAL CABINETS AND ALL ASSOCIATED WIRING AND CONDUIT. PANELS ARE LOCATED BETWEEN THE 1949 AND 1969 BUILDING. CONCRETE PAD TO BE REMOVED FLUSH WITH EXISTING CONCRETE FLOOR SLAB. NO PNEUMATIC OR VIBRATING DEVICES ALLOWED FOR DEMO OF CONCRETE CURBS.
4. DEMO EXISTING BACKWASH RATE OF FLOW DIGITAL DISPLAY AND ALL ASSOCIATED WIRING AND CONDUIT. DISPLAY IS MOUNTED TO THE CEILING LOCATED BETWEEN THE 1949 AND 1969 BUILDING.
5. CONTRACTOR IS TO CLEAN ALL INTERIOR AND EXTERIOR SURFACES OF THE WINDOWS IN THE 1969 FITER BUILDING.

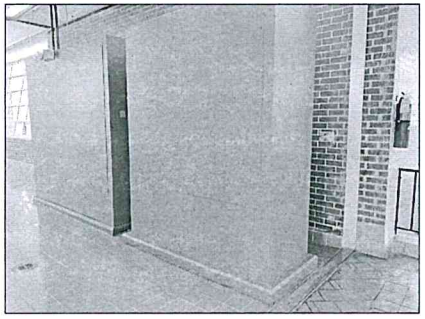


1 FILTER OPERATING CONSOLES - DEMO PLAN
SCALE: 1/8" = 1'-0"

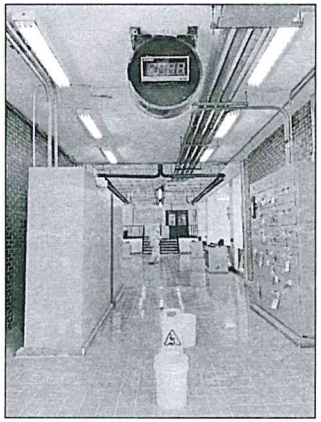


FILTER OPERATING CONSOLES

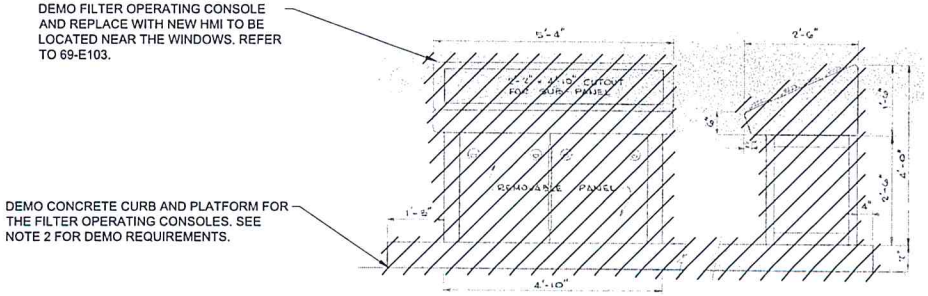
FILTER OPERATING CONSOLE DIGITAL DISPLAY



EMPTY ELECTRICAL CABINETS AND CONCRETE PADS



CEILING MOUNTED DIGITAL DISPLAY



2 FILTER OPERATING CONSOLE - DEMO SECTION
SCALE: 3/4" = 1'-0"

BARGE DESIGN SOLUTIONS

Digitally signed by Michael S. Alexander
Date: 2022.05.05 15:58:52-04'00'

1969 BUILDING - ELECTRICAL CONTROL PANEL - DEMO PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CK.	DATE	DESCRIPTION
A	MSA	MSA	05/05/2022	60% SUBMITTAL
B	AJD	MSA	05/06/2022	OWNER & AHJ REVIEW

69-DD01

FILE NO. 36432-11

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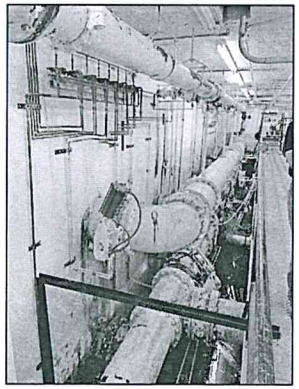
USER:AAPARKER
FILE:F:\36432\36432-11\04_CAD\WATR\36432-11_69-DD01_1969 Electrical Control Plan Demo.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

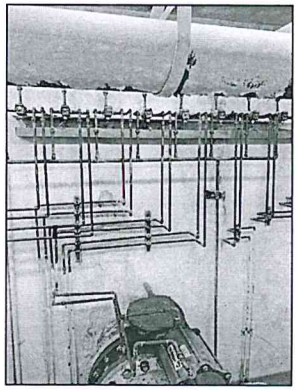
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE FILTER OPERATION CONSOLES TO THE ACTUATORS, INCLUDING SUPPORTS AND HARDWARE.
3. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE MAIN 2" SUPPLY PIPING. CAP ACTUATOR HYDRAULIC PIPING AT THE MAIN ISOLATING VALVE OR TAPPED CONNECTION. THE 2" SUPPLY LINE IS TO REMAIN.
4. REMOVE ALL VALVES IN THE VALVE SCHEDULE AND ASSOICATED ACTUATORS.
5. REMOVE ALL ACTUATOR HYDRAULIC PIPING WALL SUPPORTS, PATCH AND REPAIR CONCRETE WHERE SUPPORTS ARE REMOVED. RE-COAT PER SPEC SECTION 09 90 15. FINISH COAT COLOR TO MATCH EXISTING. ALONG WITH ALL OTHER SURFACES IN THE 1969 BUILDING WHICH ARE TO UNDERGO COATING REHAB, SEE 69-D101.

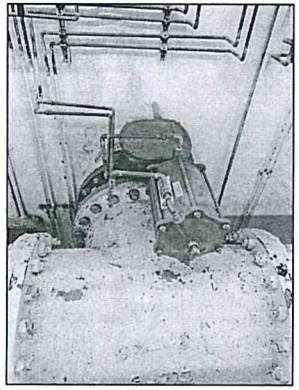


PIPE GALLERY &

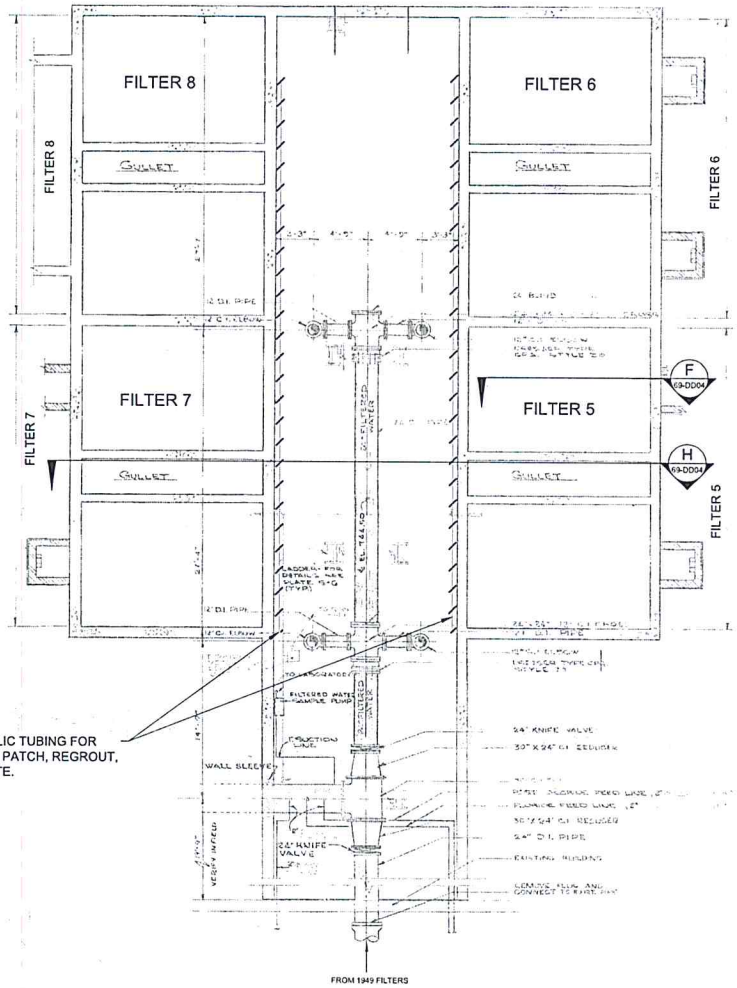
HYDRAULIC ACTUATOR PIPING



HYDRAULIC ACTUATOR & PIPING



HYDRAULIC ACTUATOR & PIPING



REMOVE ALL HYDRAULIC TUBING FOR THE OLD ACTUATORS. PATCH, REGROUT, AND REPAIR CONCRETE.

HYDRAULIC PIPING - DEMO PLAN

SCALE: 3/16" = 1'-0"

0 1' 2' 4' 8'

BARGE DESIGN SOLUTIONS

1201 Fort Avenue & Suite F / Columbus, GA 31901
PHONE (706) 324-4200

REGISTERED PROFESSIONAL ENGINEER MICHAEL P. ALEXANDER 23385 GEORGIA

Digitally signed by Michael P. Alexander
Date: 2022.05.05 16:59:11-04'00'

1969 BUILDING - HYDRAULIC ACTUATORS & PIPING DEMO PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DWN	CHK	REVISION INFORMATION	
			DATE	DESCRIPTION
A	AND	MA	MAY 2021	30% REVIEW SUBMITTAL
B	AND	MA	05/05/2022	100% REVIEW SUBMITTAL

69-DD02

FILE NO. 36432-11

USER: AMPARKER
FILE: P:\36432\D\36431\04_CAD\WATP\36431_69-DD02_1969 Hydraulic Actuator & Piping Demo.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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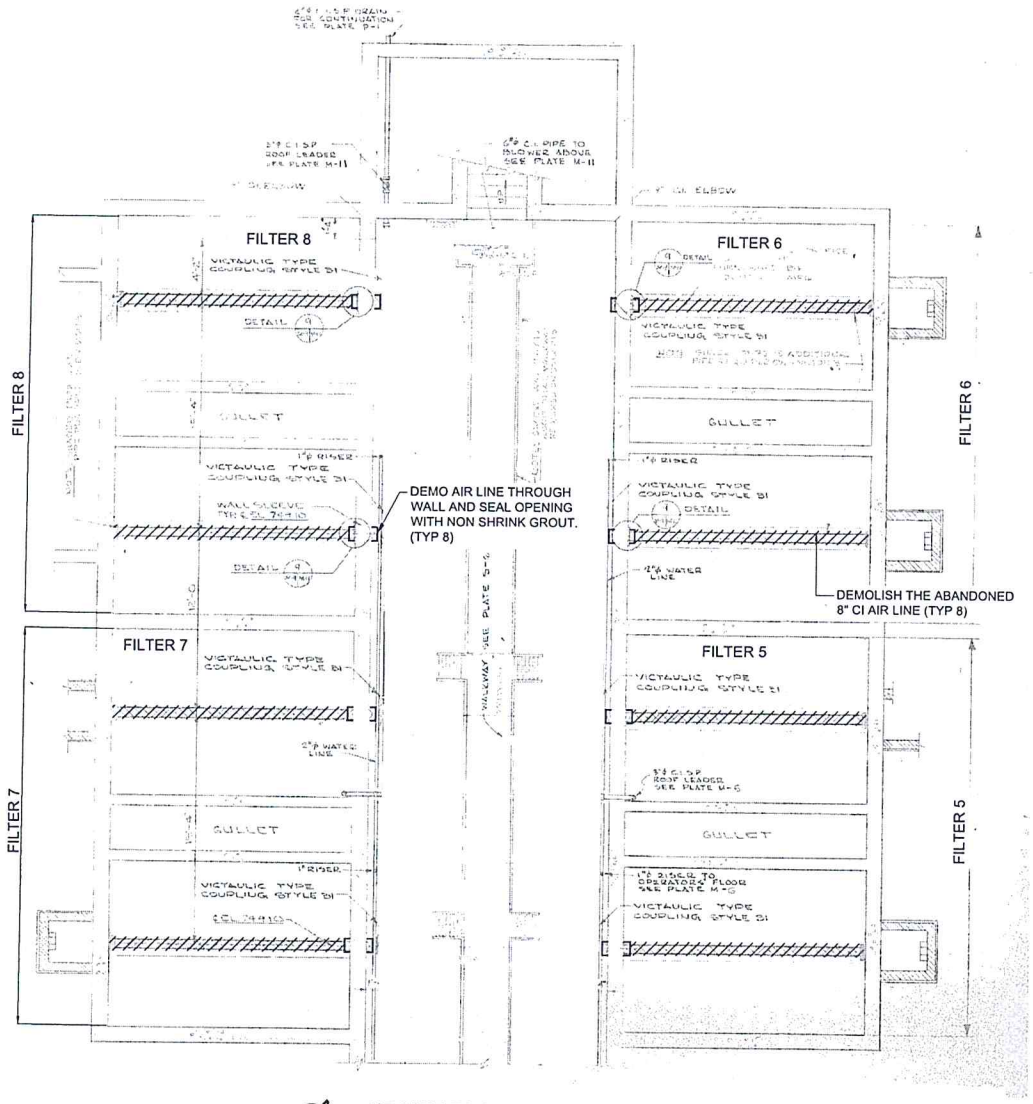
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.



AIR LINE PIPING - DEMO PLAN

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

0 1' 2' 4' 8'

BARGE DESIGN SOLUTIONS

Digital Signed by Michael P Alexander
Date: 2022.05.05 16:59:20-04'00'

1969 BUILDING - AIR LINE PIPING - DEMO PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	DSN.	DATE	REVISION DESCRIPTION
A	AMD	MA	04.27.2021	30% REVIEW SUBMITTAL
B	JCI	MA	05/05/2022	OWNER AND AGENCY REVIEW

69-DD03

FILE NO. 36432-11

USER: AMPARNER
FILE F:\36432\36432311a_CAD\WATER\36432311a_69-DD03_1969 Air Line Piping Demo.dwg
SAVED 5-5-2022
PLOTTED 5-5-2022

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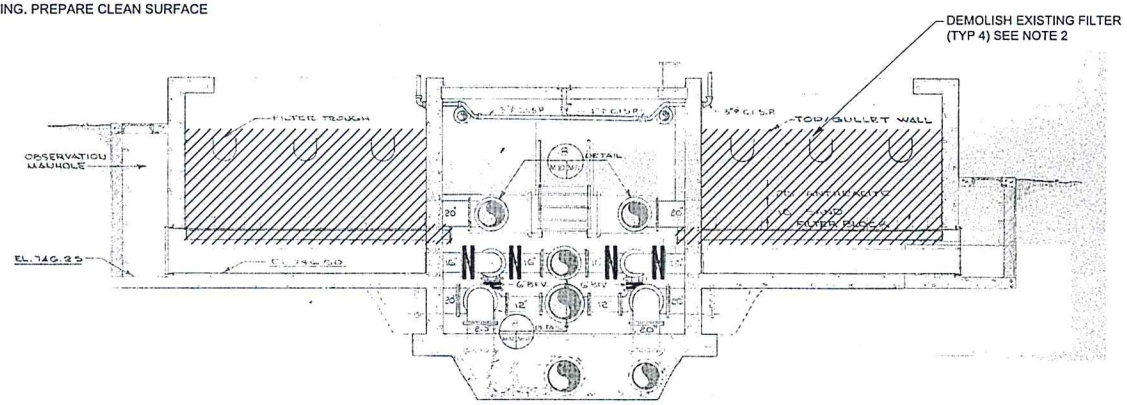
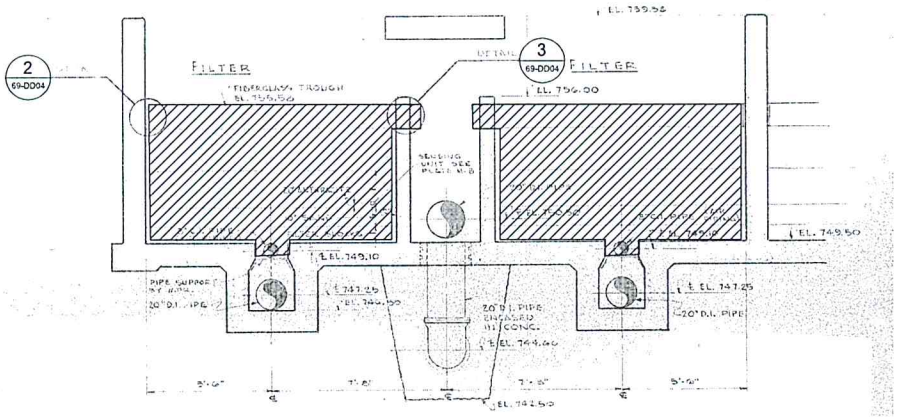
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.

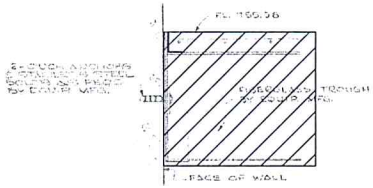
2. DEMOLISH UNDERDRAIN, FILTER MEDIA, TROUGHS, AND AIR PIPING. PREPARE CLEAN SURFACE FOR INSTALLATION OF NEW FIILTER EQUIPMENT.



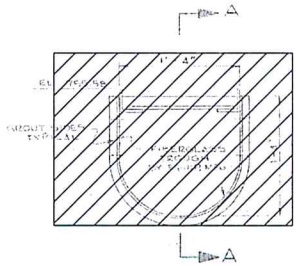
H 69-D101 DEMOLITION - SECTION
SCALE: 1/4" = 1'-0"



F 69-D101 DEMOLITION - SECTION
SCALE: 1/4" = 1'-0"



2 69-DD04 DETAIL
NTS



3 69-DD04 DETAIL
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael P Alexander
Date: 2022.05.05 16:59:30-04'00'

1969 BUILDING - DEMO - SECTIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	ADD	MAA	04/01/2022	ISSUED FOR PERMIT
B	ADD	MAA	05/02/2022	REVISED AND FOR REVIEW

69-DD04

FILE NO. 36432-11

USER:AMPARKER
FILE:F:\36432\36432\21100_CAD\WATER\36432\11_69-DD04_1969 Filter Sections Demo.dwg
DATE:05/05/2022
PLOTTED:5/5/2022

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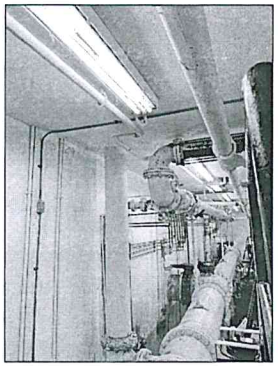
NOTES:

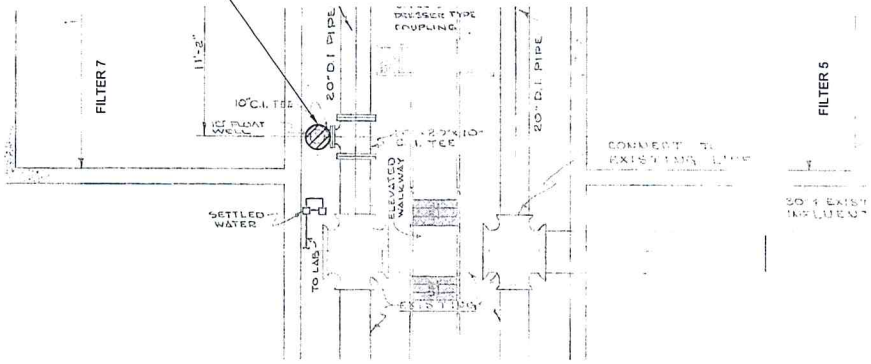
1. BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. 10" DUCTILE IRON STAND PIPE (FLOAT WELL) EXTENDING INTO THE FILTER GALLERY IS TO BE DEMOLISHED.



FLOAT WELL IN PIPE GALLERY

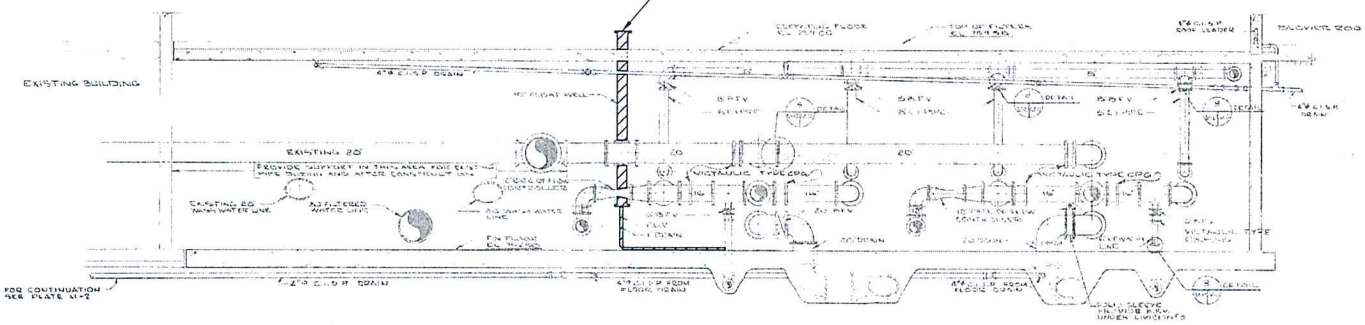
FLOAT WELL IN FILTER GALLERY

10" SETTLED WATER FLOAT WELL PIPE TO BE DEMOLISHED BACK TO 10" TEE INSTALL BLIND FLANGED AT TEE.



1 FLOAT WELL PIPE - DEMO PLAN
SCALE: 1/4" = 1'-0"

10" FLOAT WELL PIPE IN THE FILTER GALLERY TO BE DEMOLISHED.



D 69-D101 FLOAT WELL PIPE - DEMO SECTION
SCALE: 1/4" = 1'-0"

BARGE DESIGN SOLUTIONS

Digitally signed by Michael C Alexander
Date: 2022.05.05 16:59:40-04'00'

1969 BUILDING - FLOAT WELL PIPE - DEMO PLAN / SECTION

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION INFORMATION			
REV.	CHK.	DATE	DESCRIPTION
A	MCA	04/01/2022	60% CONSTRUCTION DOCUMENTS
B	ADD	05/05/2022	OWNER AND AGENCY REVIEW

69-DD05

FILE NO. 36432-11

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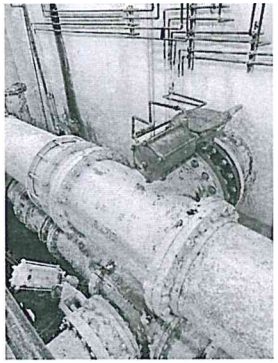
USER:AMPARKER
FILE:F:\36432\36432\11\04_CAD\WATR\36432\11_69-DD05_1969 Float Well Pipe Demo.dwg
SAVED:5-5-2022
PLOTTED:5-5-2022

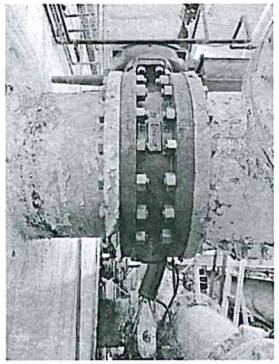
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. SETTLED BUTTERFLY VALVES AND DRESSER COUPLINGS (4X) ARE TO BE REPLACED.
7. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.

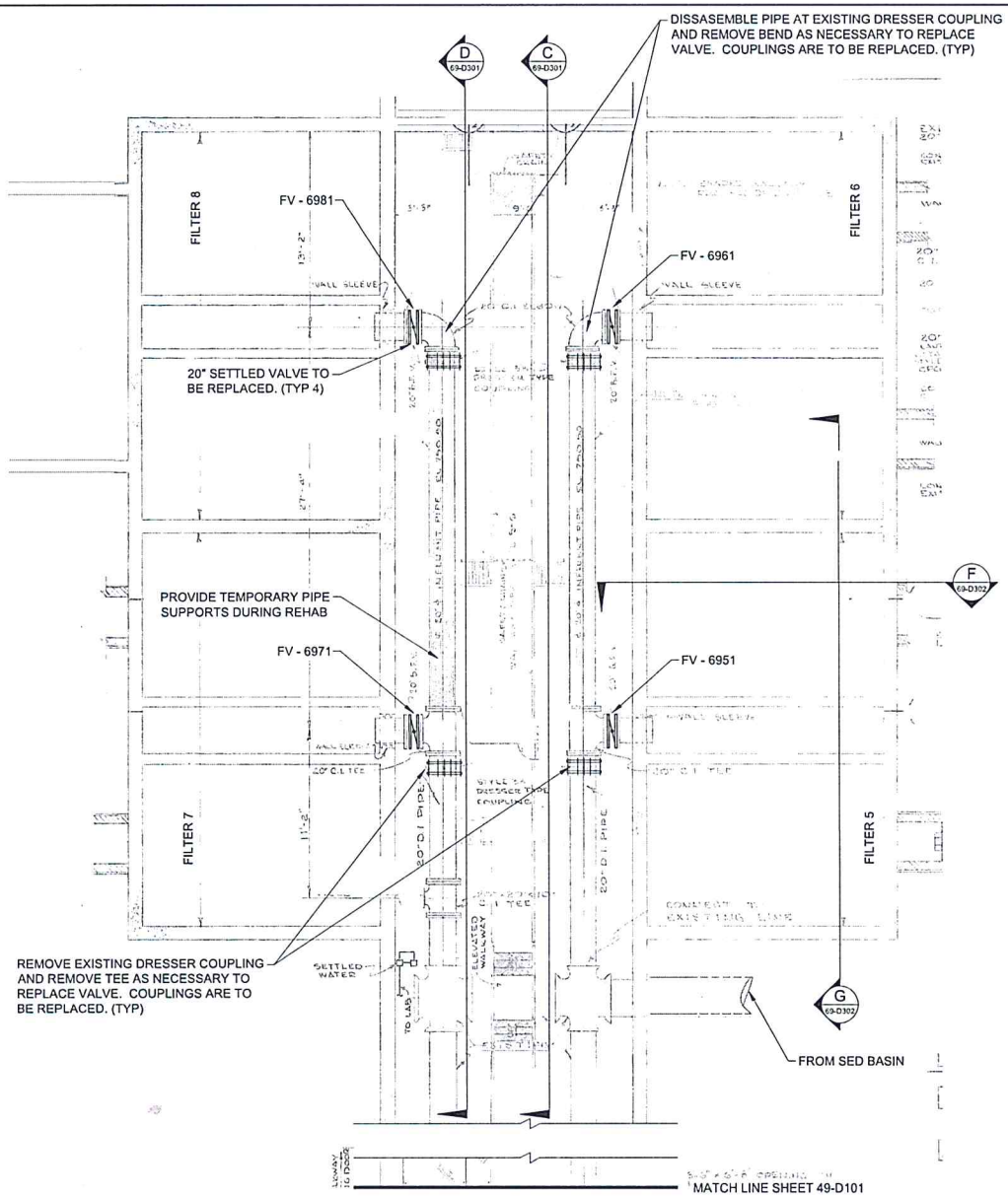
EXISTING PIPE SUPPORTS



20" SETTLED VALVE & COUPLING



20" SETTLED VALVE



SETTLED VALVE REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael E Alexander
Date: 2022.05.05 16:57:08-04'00'

1969 BUILDING - SETTLED VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION INFORMATION				
REV	DR.	CHK.	DATE	DESCRIPTION
A	AMS	MA	MAY 2021	90% PEER SUBMITTAL
B	AG	MA	05/05/22	100% PEER SUBMITTAL REVIEW

69-D101

FILE NO. 36432-11

USER: AMPARKER
FILE: F:\365\36432\36432110\4_CAD\WATER\36432211_69-D101_1969 Settled Valve Replacement Plan.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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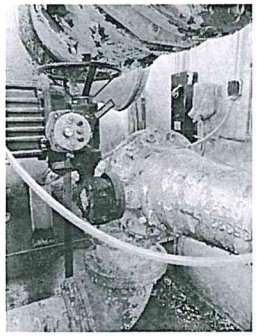
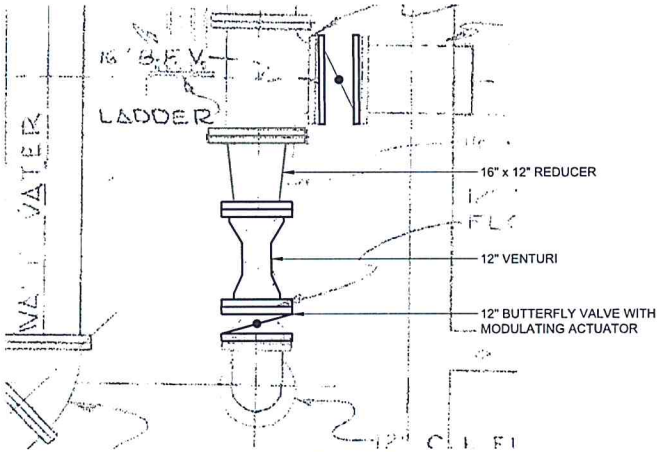
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT
6. EXISTING FILTERED BIF MODEL 603 CONTROLLERS (4X) ARE TO REMOVED.
7. NEW FILTERED BUTTERFLY VALVES (4X) AND VENTURI (4X) ARE TO BE INSTALLED.
8. BACKWASH BUTTERFLY VALVES (12X) ARE TO BE REPLACED.
9. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION

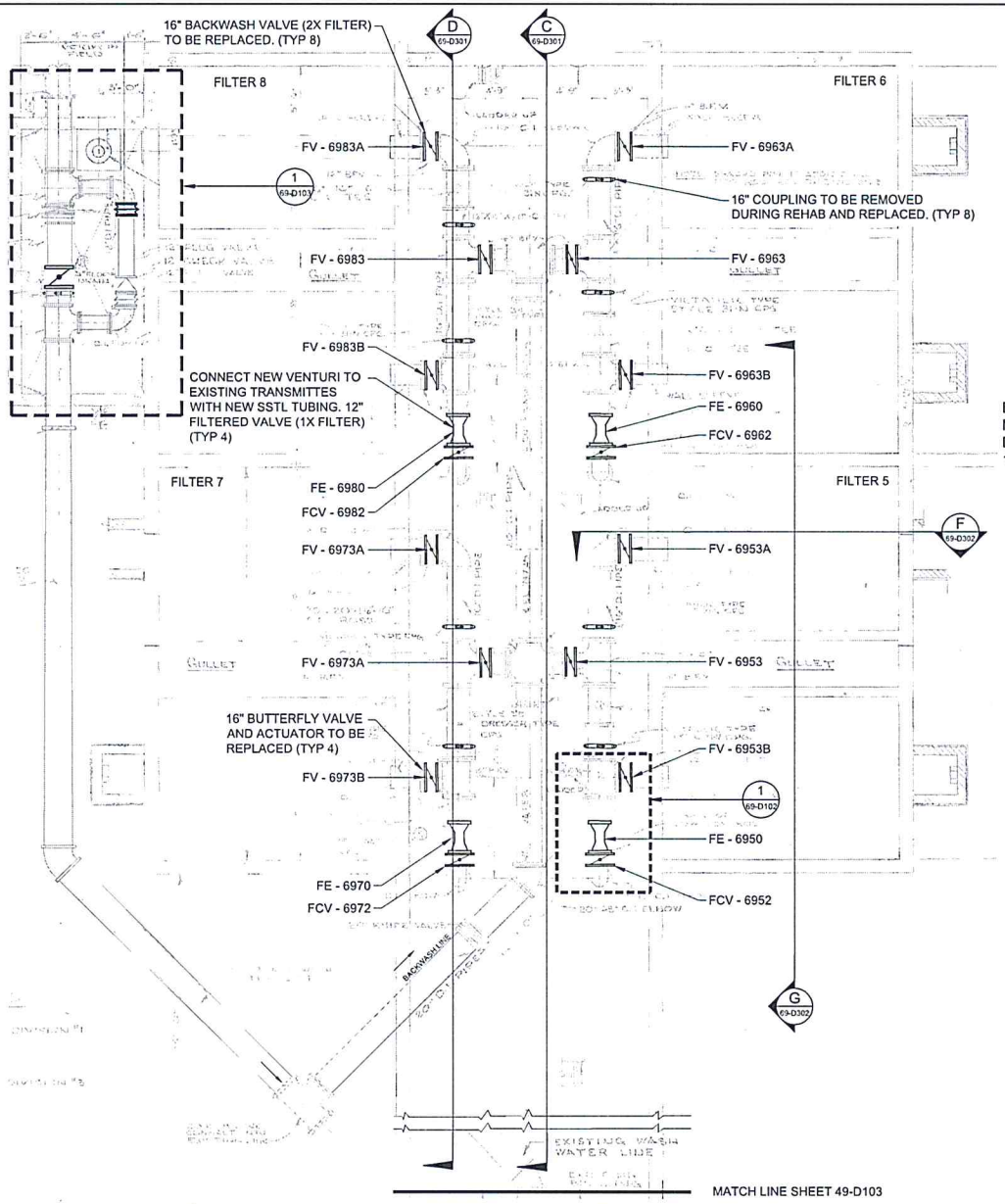
16" BACKWASH VALVE & COUPLING



12" EFFLUENT VALVE BUILT INTO BIF CONTROLLER



1 69-D102 ROF CONTROLLER DETAIL TYP 4
NTS



FILTERED & BACKWASH VALVE REPLACEMENT - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael P Alexander
Date: 2022.05.05 16:57:17-04'00'

1969 BUILDING - FILTERED VALVE & BACKWASH REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AD	MA	04/01/2022	60% Submittal
B	AD	MA	05/05/2022	OWNER AND AGENCY REVIEW

69-D102

FILE NO. 36432-11

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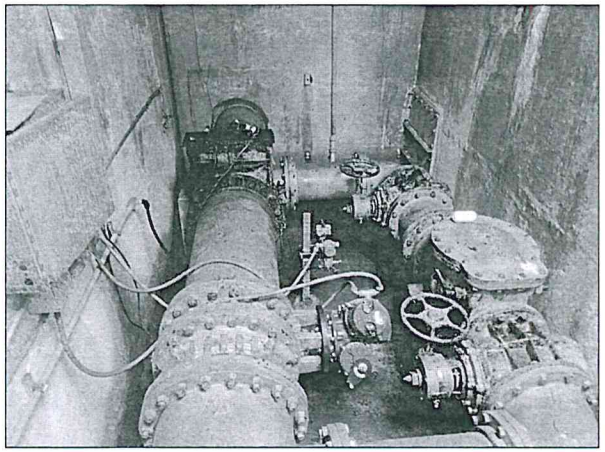
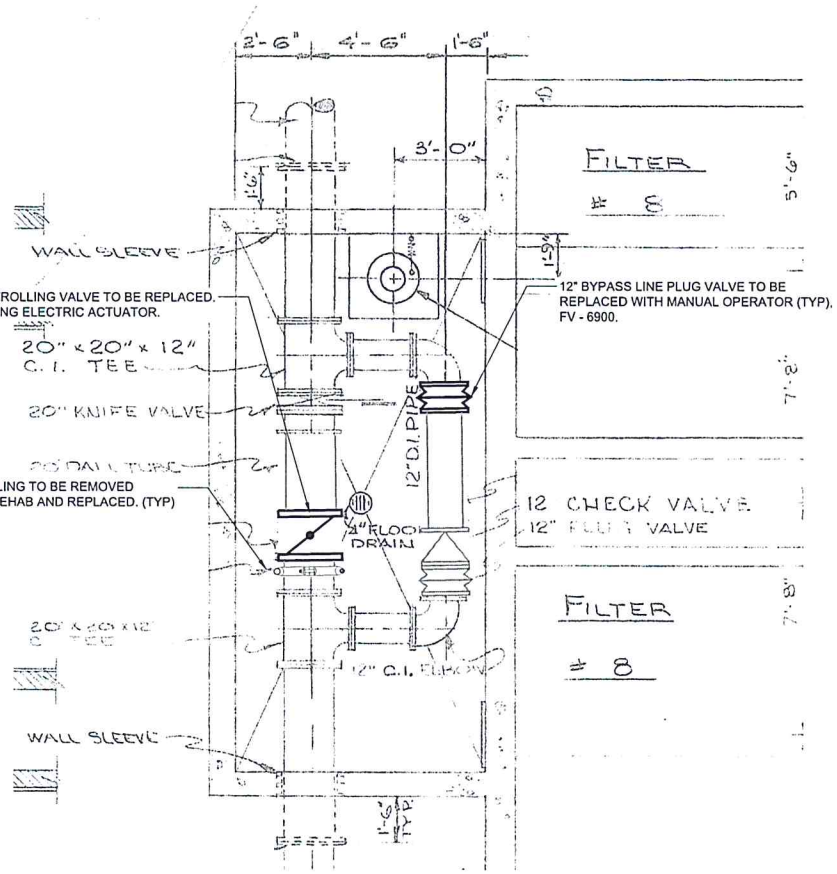
USER AARONER
FILE C:\ACAD\36432\11\04_CAD WATER\36432111_69-D102_1969 Filtered Valve Replacement Plan.dwg
SAVED 5/5/2022
PLOTTED 5/5/2022

NOTES:

1. BACKGROUND PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.
7. BACKWASH FLOW CONTROLLING BUTTERFLY VALVE AND COUPLING (1X) TO BE REPLACED.
8. BACKWASH BYPASS LINE PLUG VALVE (1X) TO BE REPLACED.



20" BACKWASH CONTROLLING VALVE & 12" PLUG VALVE BYPASS VALVE



1 (69-D103) BACKWASH SUPPLY VAULT REPLACEMENT - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael D Alexander
Date: 2022.05.05 16:57:27-04'00'

1969 BUILDING - BACKWASH SUPPLY REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CK.	DATE	DESCRIPTION
A	MAT	MA	MAY 2022	30% DESIGN SUBMITTAL
B	AD	MA	MAY 2022	OWNER AND AE/ENGINEER REVIEW

69-D103

FILE NO. 36432-11

USER: AMPARKER
FILE: F:\36432\36432-11\04_CAD WATR\36432-11_69-D103_1969 Backwash Valve Replacement Plan.dwg
LAYOUT: 69-D103
PLOTTED: 5/5/2022

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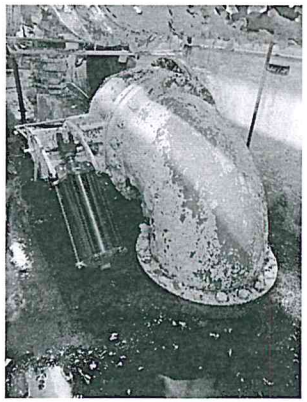
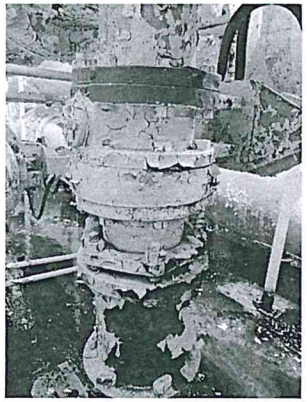
NOTES:

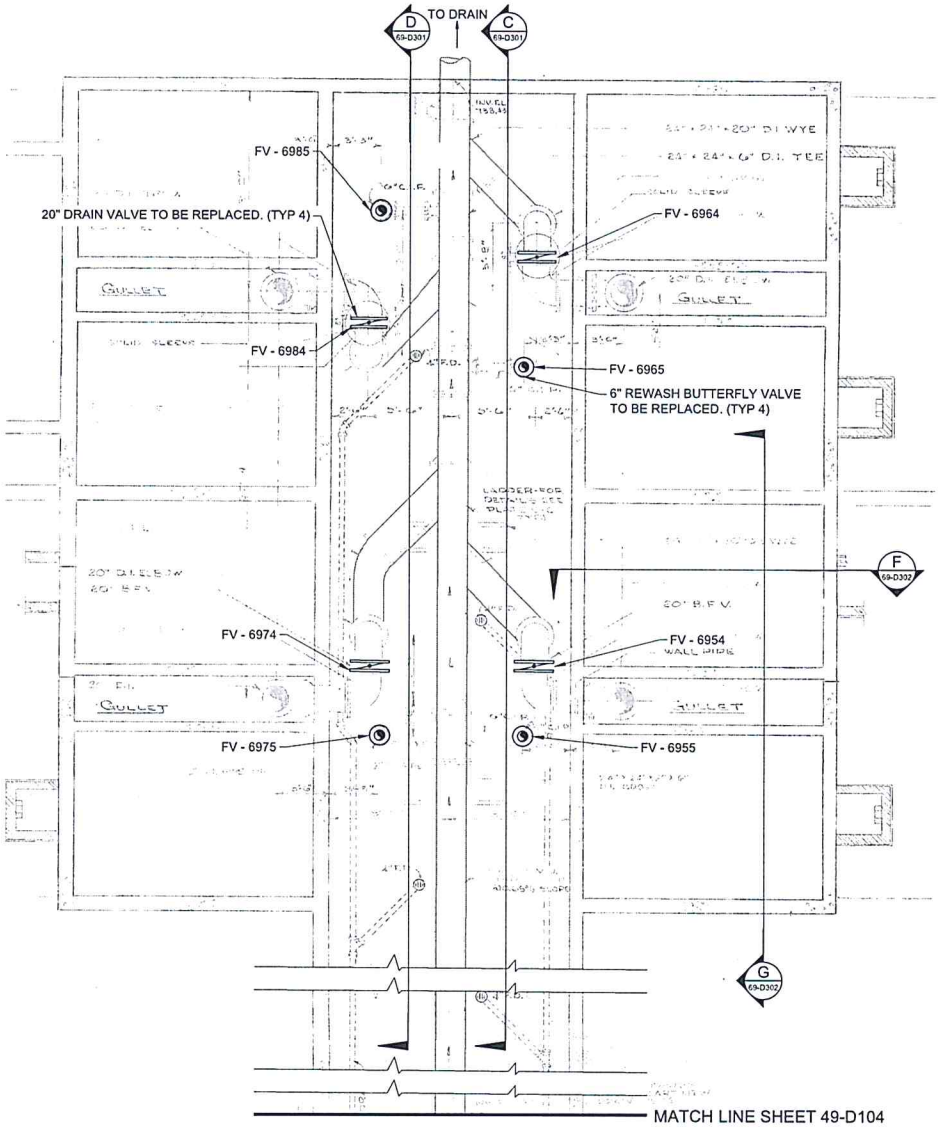
1. BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
5. DRAIN BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
6. REWASH BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
7. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND SLEEVES REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



20" DRAIN VALVE



6" REWASH VALVE AND ACTUATOR



WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael A Alexander
Date: 2022.05.05 16:57:36-04'00'

1969 BUILDING - WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR.	CHK.	REVISION DESCRIPTION
A	KEP	MA	MAY 2011 - 30% REVIEW SUBMITTAL
B	JCD	MA	05/05/2022 - OWNER AND FACILITIES REVIEW

69-D104

FILE NO. 36432-11

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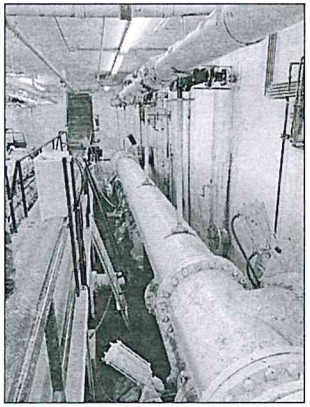
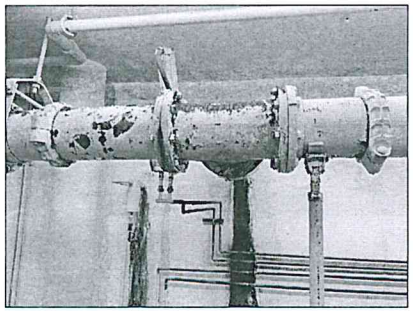
USER: KEPPLER
FILE: J:\36432\36432-11\04_CAD\WATR\36432-11_69-D104_1969 Waste (Drain) Valve Replacement Plan.dwg
SAVED 5/5/2022
PLOTTED 5/5/2022

NOTES:

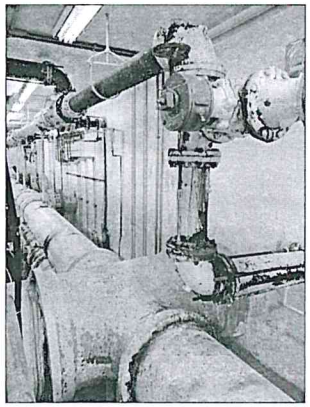
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. SURFACE SWEEP BUTTERFLY VALVES (TYP 8) AND COUPLINGS (TYP 14) ARE TO BE REPLACED.
7. INSTALL A NEW 6" PLUG VALVE ON THE NON-POTABLE WATER SUPPLY LINE TO ISOLATE THE 1969 BUILDING SURFACE SWEEP PIPING SYSTEM.
8. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.
9. REMOVE AND REPLACE ALL HYDROSTATIC SEALS (TYP 8).



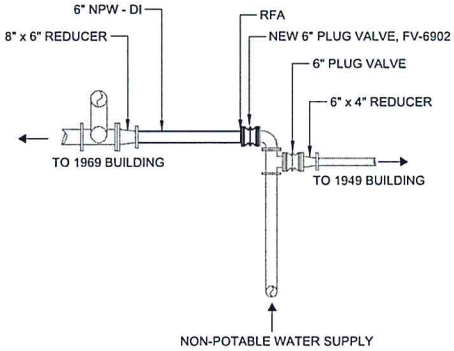
SURFACE SWEEP PIPING AND SUPPORTS



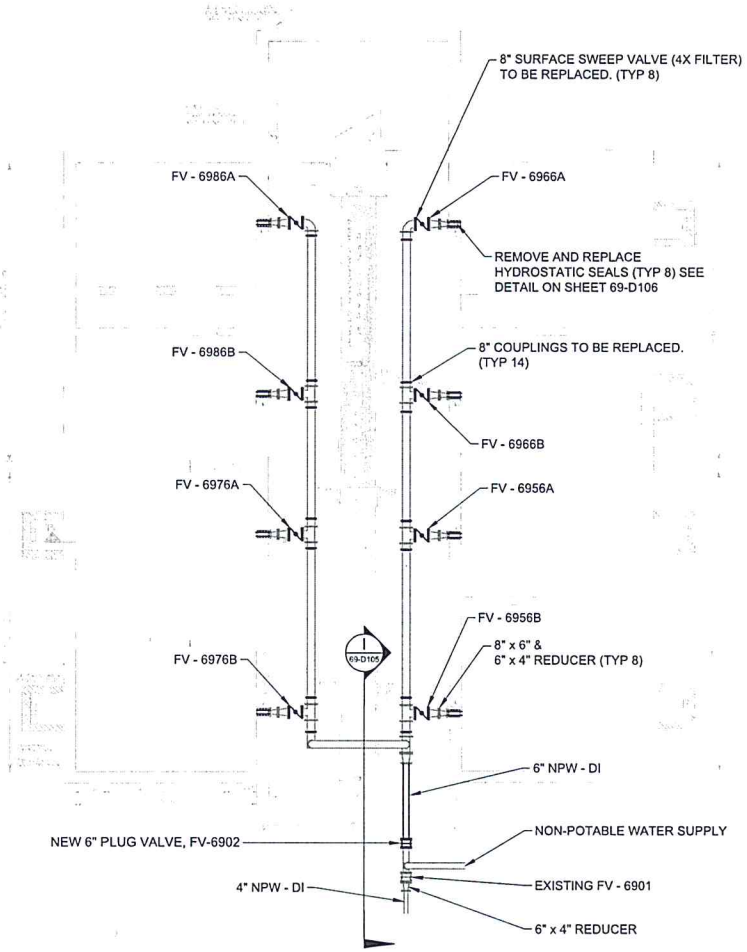
SURFACE SWEEP COUPLINGS



SWEEP WATER SOURCE



1 / 69-D105 SECTION
NTS



SURFACE SWEEP VALVE REPLACEMENT - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael L. Alexander
Date: 2022.05.05 16:57:45-04'00'

1969 BUILDING - SURFACE SWEEP VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	MA	MA	04/27/2022	75% SUBMITTAL
B	AD	MA	05/05/2022	OWNER AND AGENCY REVIEW

69-D105

FILE NO. 36432-11

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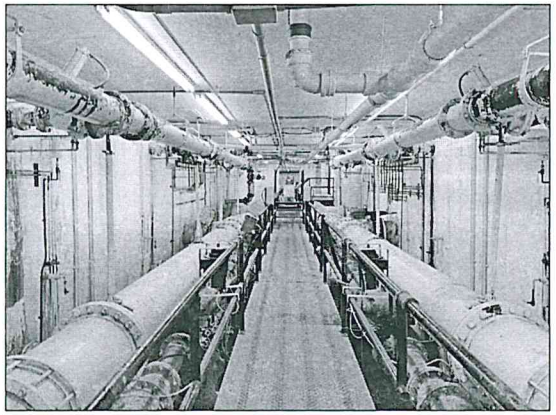
USER: AMOANGER
FILE: U:\36432\36432-11\04_CAD\WATER\36432-11_69-D105_1969 Surface Sweep Valve Replacement Plan.dwg
DATE: 05/05/2022
PLOTTED: 5/5/2022

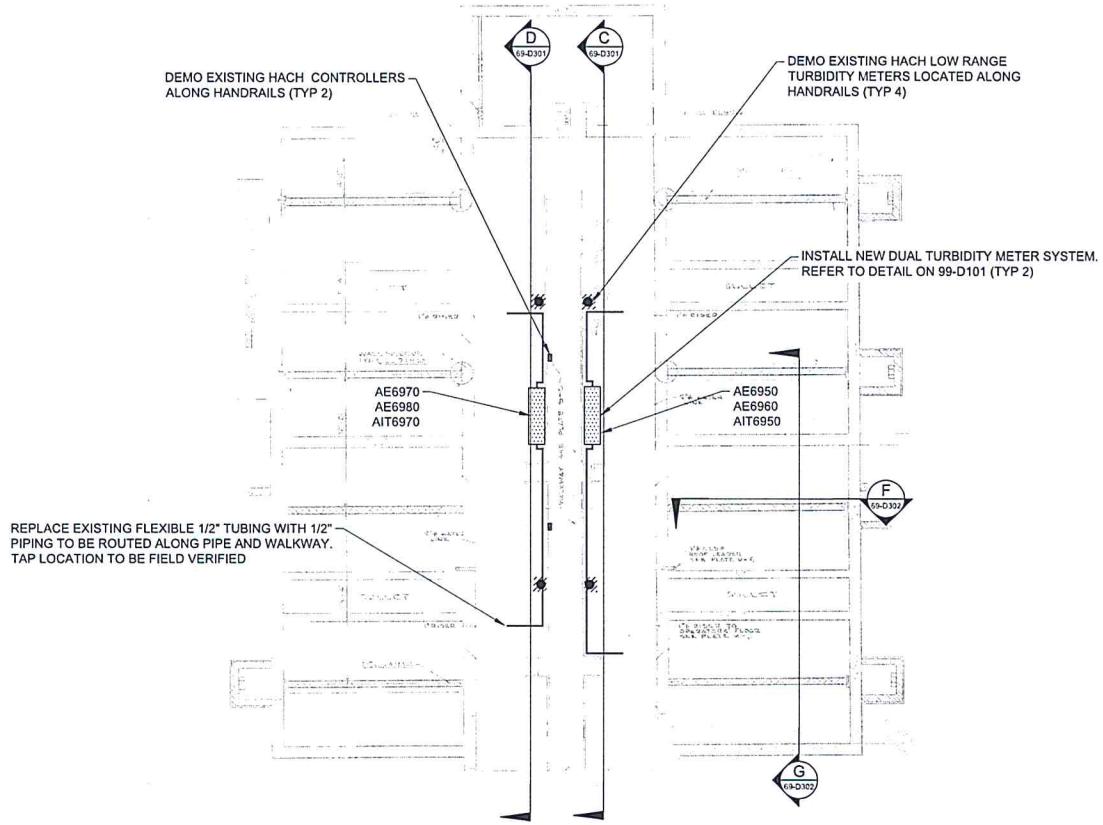
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.

2. IN THE PIPE GALLERY REMOVE FOUR (4) EXISTING HACH TURBIDITY METERS MODEL 1720E, TWO (2) HACH CONTROLLERS MODEL SC200, AND ALL HARDWARE. INSTALL FOUR (4) NEW HACH TURBIDITY METERS MODEL TU5300SC AND TWO (2) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.



TURBIDITY METER CONTROLLER



TURBIDITY SYSTEM REPLACEMENT - PLAN

NTS

BARGE DESIGN SOLUTIONS

1201 Front Avenue Suite F Columbus, GA 31901
PHONE: (706) 323-4436

REGISTERED PROFESSIONAL ENGINEER
MICHAEL P. ALEXANDER
GEORGIA
No. 27733

Digitally signed by Michael P. Alexander
Date: 2022.05.05 16:57:55-04'00'

1969 BUILDING - TURBIDITY SYSTEM REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION RECORD			
REV	DR.	CHK.	DATE	DESCRIPTION
A	AD	MA	04/01/2022	30% CONSTRUCTION DRAWINGS AND ARE NOT FOR USE
B	AD	MA	05/02/2022	ISSUED FOR REVIEW

69-D106

FILE NO. 36432-11

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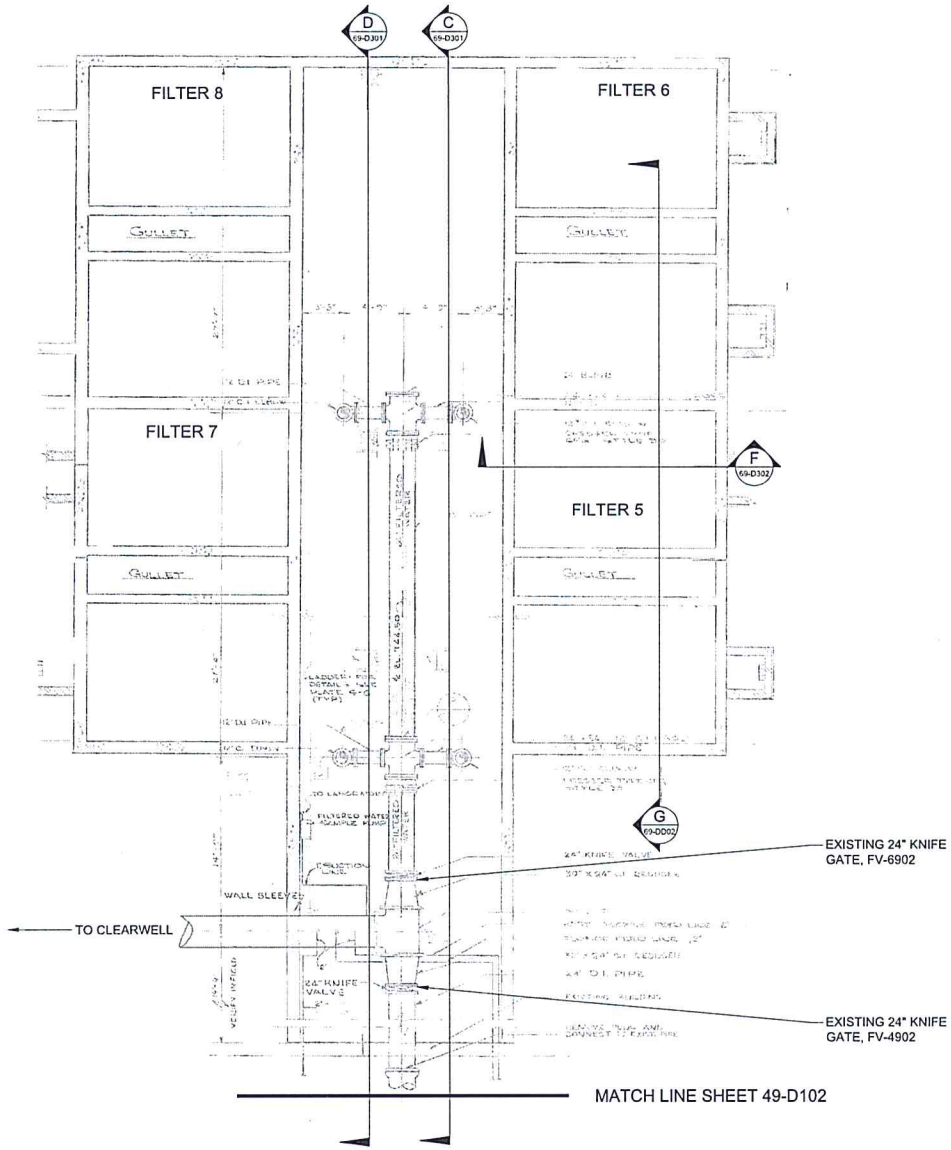
USER: AMPARLER
FILE: T:\36432\04321104_CAD MATRIX\04321_69-D106_1969 Turbidity System Replacement Plan.dwg
DATE: 5/5/2022
PLOTTED: 5/5/2022

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.



FILTERED WATER - PLAN
NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael P Alexander
Date: 2022.05.05 16:58:05-04'00'

1969 BUILDING - FILTER WATER - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJG	MA	04/27/2021	100% Design Submittal
B	AJG	MA	05/05/2022	Owner Review Comment Review

69-D107

FILE NO. 36432-11

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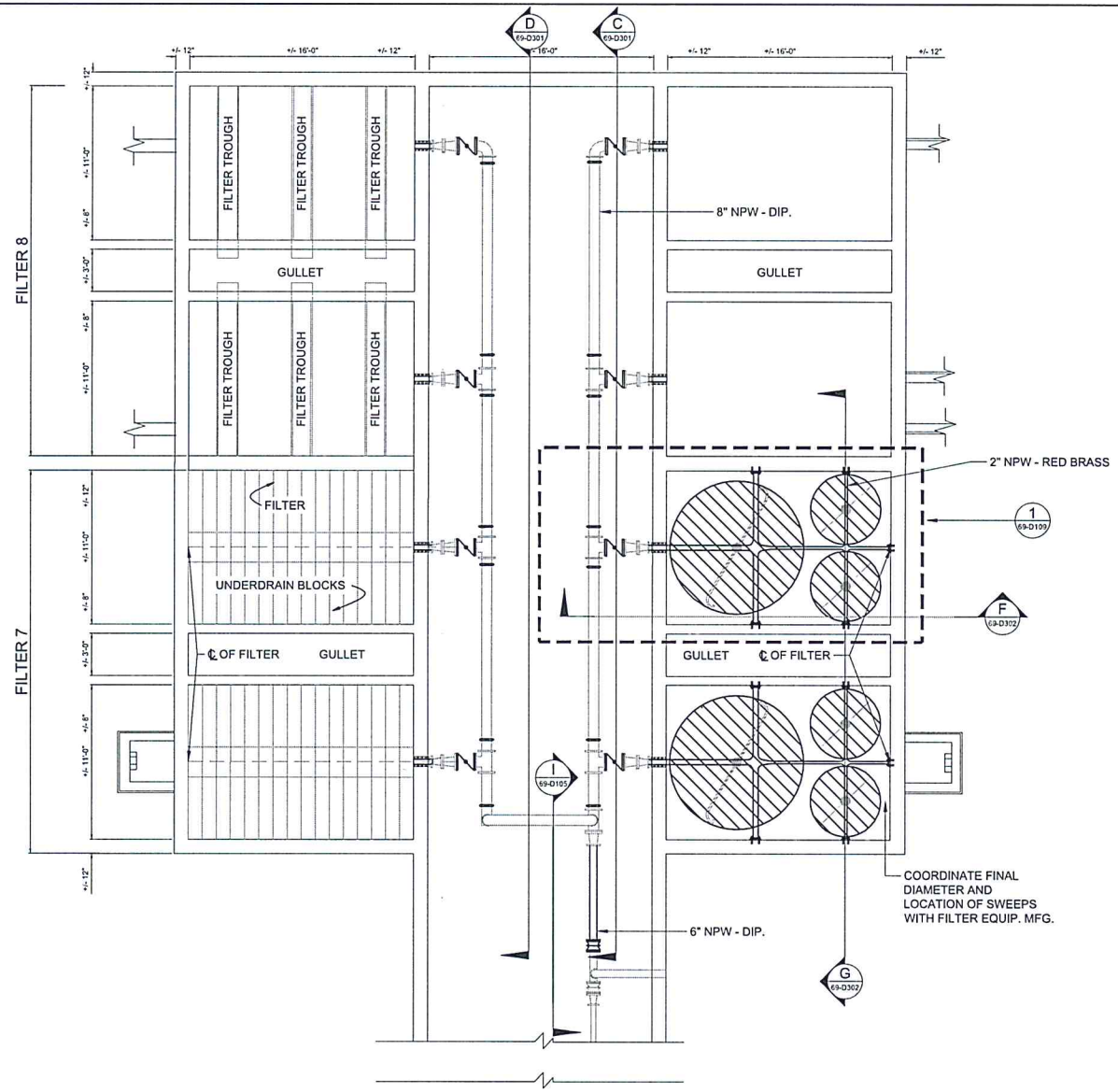
USER:AJPARKER
FILE:F:\36432\36432011\04_CAD\WATR\364311_69-D107_1969 Effluent Valve Replacement Plan.dwg
DATE:05/05/2022
PLOTTED:5/5/2022



MATCH SHEET 49-D106

FILTER - PLAN

NTS

BARGE DESIGN SOLUTIONS

Digitally signed by Michael P. Alexander
Date: 2022.05.05 16:58:15-04'00'

1969 BUILDING - FILTER - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV'D	ENG.	CHK.	DATE	DESCRIPTION
A	AMS	MA	04/29/2022	90% DESIGN SUBMITTAL
B	AD	MA	05/02/2022	OWNER AND AGENCY REVIEW

69-D108

FILE NO. 36432-11

USER: AMPARKER
FILE: P:\36432\36432-11\01_CAD\WATER\36432-11_69-D108_1969 Filter Plan.dwg
DATE: 5/5/2022
PLOTTED: 5/5/2022

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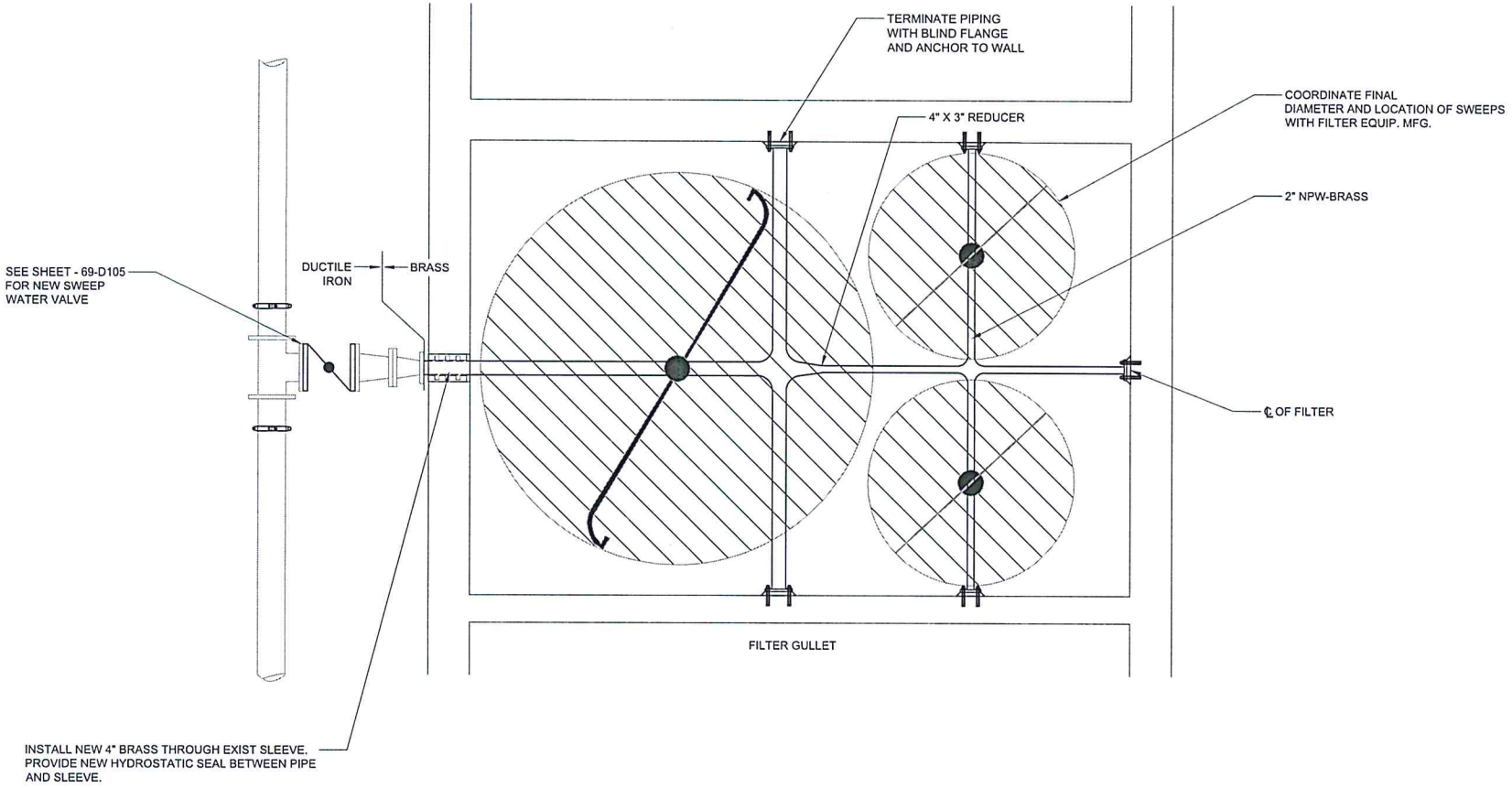

1 / 69-D109 FILTER SWEEP - DETAIL
NTS

BARGE DESIGN SOLUTIONS
1201 Front Avenue | Suite F | Columbus, GA 31901
PHONE (706) 327-4466

Digitally signed by Michael C Alexander
Date: 2022.05.05 16:58:24-04'00'

1969 BUILDING - FILTER SWEEP - DETAIL

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR.	CHK.	REVISION INFORMATION	DATE
A	MJR	MA	90% REVIEW SUBMITTAL	MAY 2021
B	JAD	MA	OWNER AND AGENCY REVIEW	05/02/2022

69-D109

FILE NO. 36432-11

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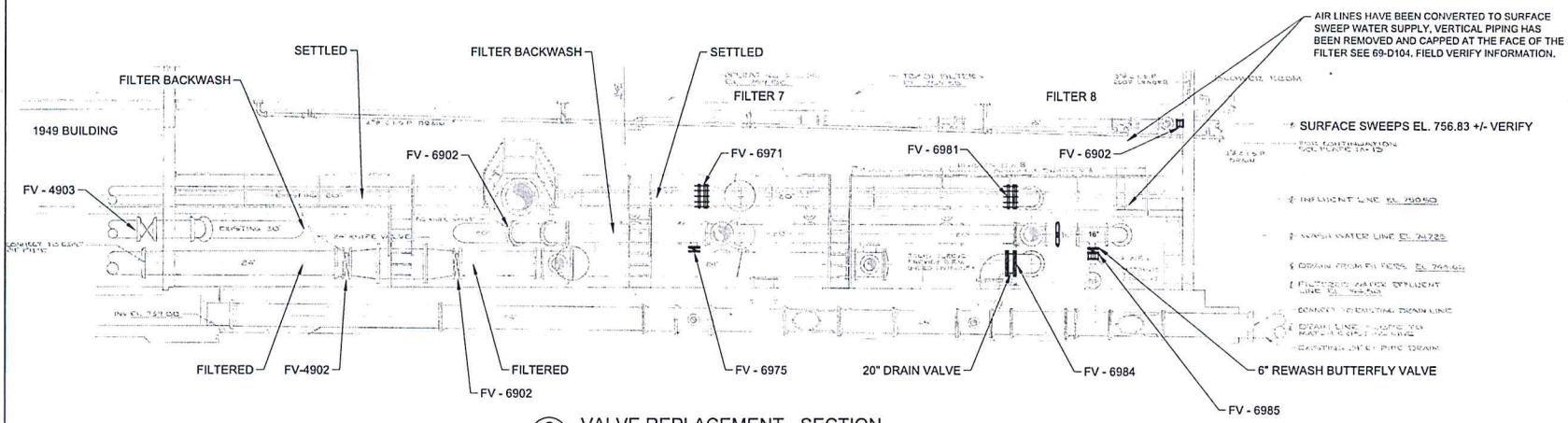
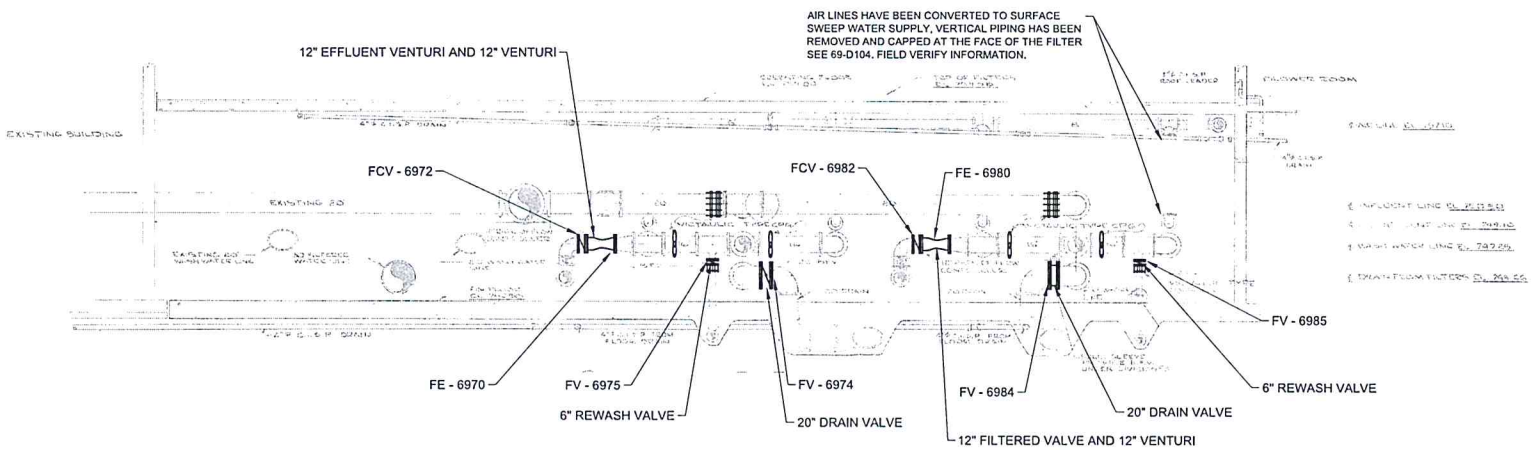
USER: MPARKER
FILE: 36432\36432\11\01_CAD\KATR\36432\11_69-D109_1969 Filter Underdrain Detail.dwg
SAVED: 5/2022
PLOTTED: 5/5/2022

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DRAWING DOES NOT INCLUDE SURFACE SWEEP PIPING AND VALVES. SEE SHEET 69-D105.



C 69-D101 VALVE REPLACEMENT - SECTION
SCALE: 1/4" = 1'-0"



D 69-D101 VALVE REPLACEMENT - SECTION
SCALE: 1/4" = 1'-0"

BARGE DESIGN SOLUTIONS

Digitally signed by Michael C Alexander
Date: 2022.05.05 16:58:34-04'00'

1969 BUILDING - VALVE REPLACEMENT - SECTIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISIONS			
REV	DR.	CHK.	DATE	DESCRIPTION
A	MAP	MCA	04/14/22	30% DESIGN SUBMITTAL
B	AJD	BJA	05/05/2022	CHANGE AND ADD VALVE VIEW

69-D301

FILE NO. 36432-11

USER:AMPARKER
FILE:F:\36432\36432\11\01_CAD\RATR\36432_69-D301_1969 Valve Replacement Sections.dwg
PLOTTED:05/05/2022

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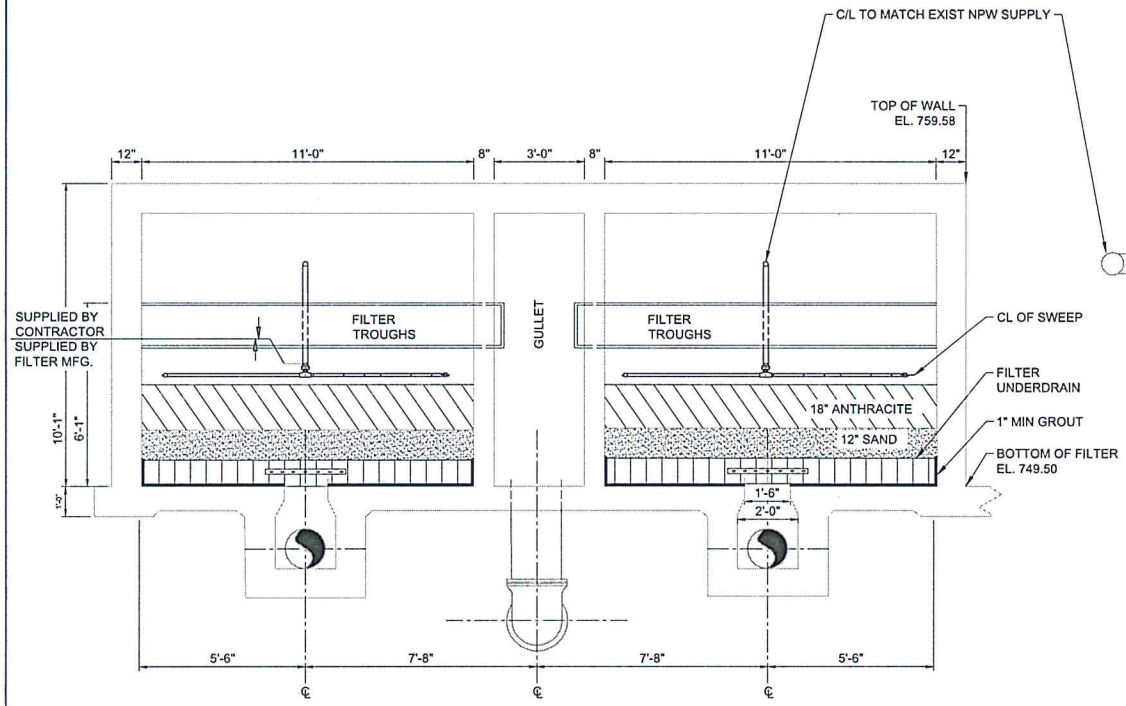
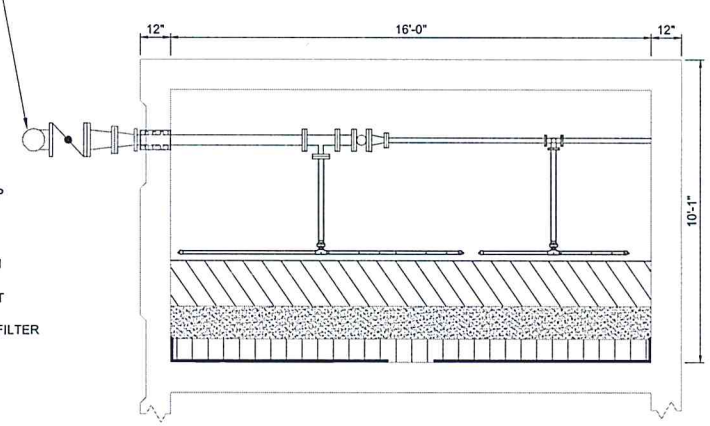


G 69-D106 FILTER UNDERDRAIN SYSTEM - SECTION

SCALE: 1/2" = 1'-0"



F 69-D106 FILTER UNDERDRAIN SYSTEM - SECTION

SCALE: 1/2" = 1'-0"

BARGE DESIGN SOLUTIONS

1211 First Avenue Suite F | Columbus, GA 31901
PH.NO. (706) 323-4120

Digitally signed by Michael D Alexander
Date: 2022.05.05 16:58:43-04'00'

1969 BUILDING - FILTER - SECTIONS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
A	PMS	MA	MAY 2021	90% REVIEW SUBMITTAL
B	AD	MA	DEC 2021	100% REVIEW SUBMITTAL

69-D302

FILE NO. 36432-11

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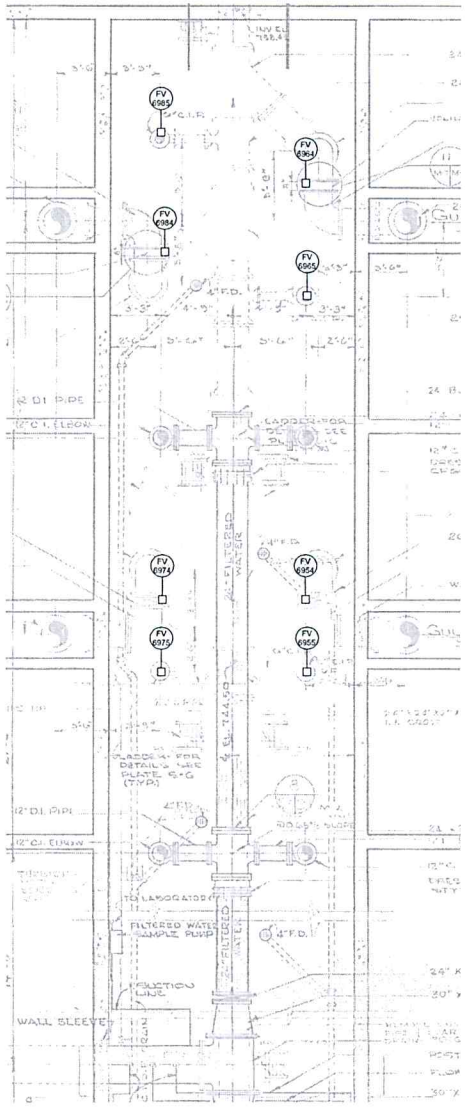
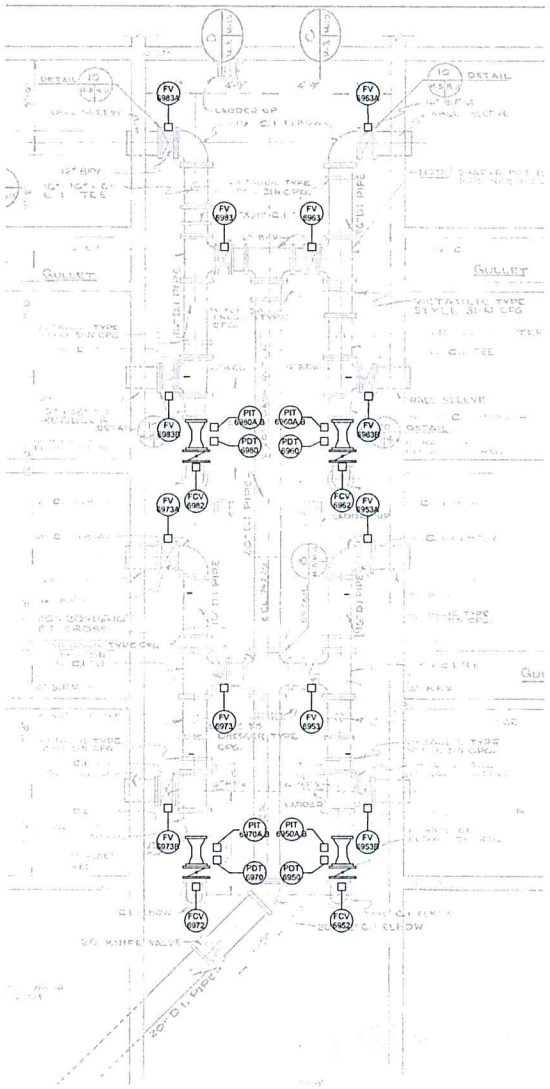
USER: AMPARKER
FILE: F:\36\36432\36432\11\04_CAD\WATER\36432\11_69-D302_1969 Filter Sections.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022



PLAN NORTH

1 69-E101 **PIPE GALLERY (ELEV. 744.67) - ELECTRICAL PLAN**

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



PLAN NORTH

2 69-E101 **PIPE GALLERY (ELEV. 747.25) - ELECTRICAL PLAN**

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

GENERAL NOTES

A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

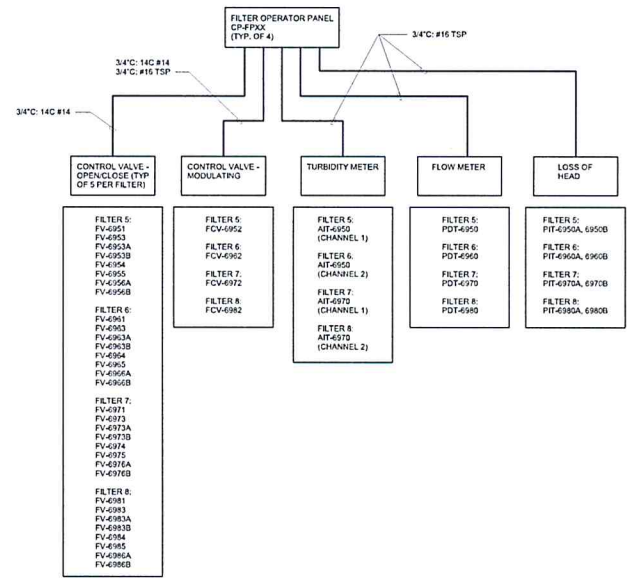
B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FAR/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR ON BACK WALL OR ON CENTER AT RAILING. PROVIDE 3 FT MIN CLEARANCE.

C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

D. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.

E. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.

F. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.



3 69-E101 **TYPICAL CONTROL WIRING DIAGRAM #2**

NTS

BARGE DESIGN SOLUTIONS

Brian W Landry

STATE OF GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE046893 BRIAN WILLIAM LANDRY

1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	DR.	CHK.	DATE	DESCRIPTION
A	CSM	BL	MAY 2021	30% REVIEW SUBMITTAL
B	CSM	BL	2/04/2022	100% REVIEW AND ADDENDA REVIEW

69-E101

FILE NO. 3643211

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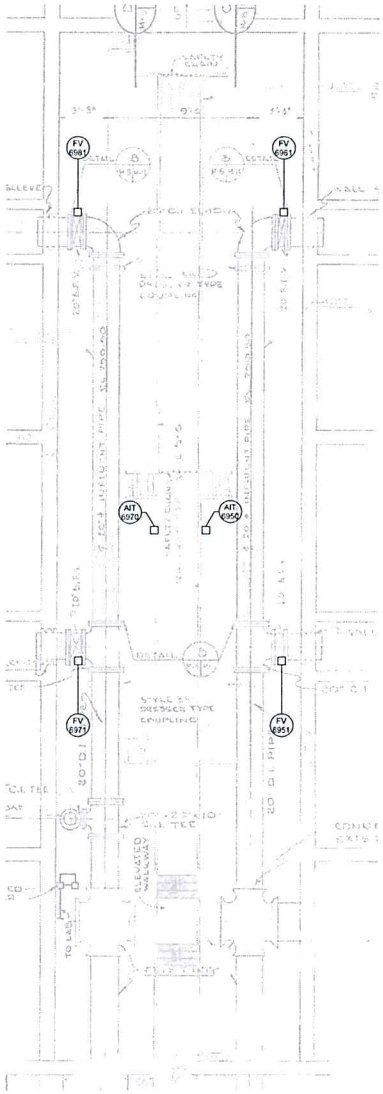
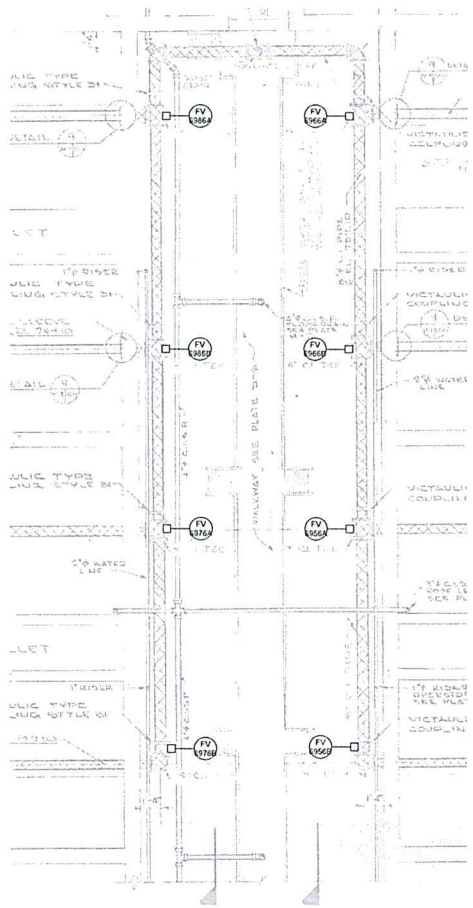


PLAN NORTH

1 69-E102 **PIPE GALLERY (ELEV. 750.50) - ELECTRICAL PLAN**

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



PLAN NORTH

2 69-E102 **PIPE GALLERY (ELEV. 757.10) - ELECTRICAL PLAN**

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

GENERAL NOTES

A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FA/R/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR.

C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

D. PROVIDE 1"C:14C-#14 CONTROL WIRING FROM EACH FV049XX ACTUATOR TO THE FILTER CONTROL PANEL CP-FPXX.

E. PROVIDE 3/4"C:TSP #16 AWG TO EACH TURBIDITY METER FROM FILTER CONTROL PANEL CP-FPXX.

F. PROVIDE 3/4"C:TSP #16 AWG TO EACH FLOW METER FROM FILTER CONTROL PANEL CP-FPXX.

G. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.

H. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.

I. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.

BARGE DESIGN SOLUTIONS
615 3rd Avenue South | Suite 700 | Nashville, Tennessee 37210
Phone: 615.254.5391 | Fax: 615.254.5372

Brian W Landry

STATE OF GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE046893 BRIAN WILLIAM LANDRY

1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CRM	BL	MAY 2021	30% REVIEW SUBMITTAL
B	CRM	BL	05/06/2022	100% REVIEW SUBMITTAL

69-E102

FILE NO. 3643211

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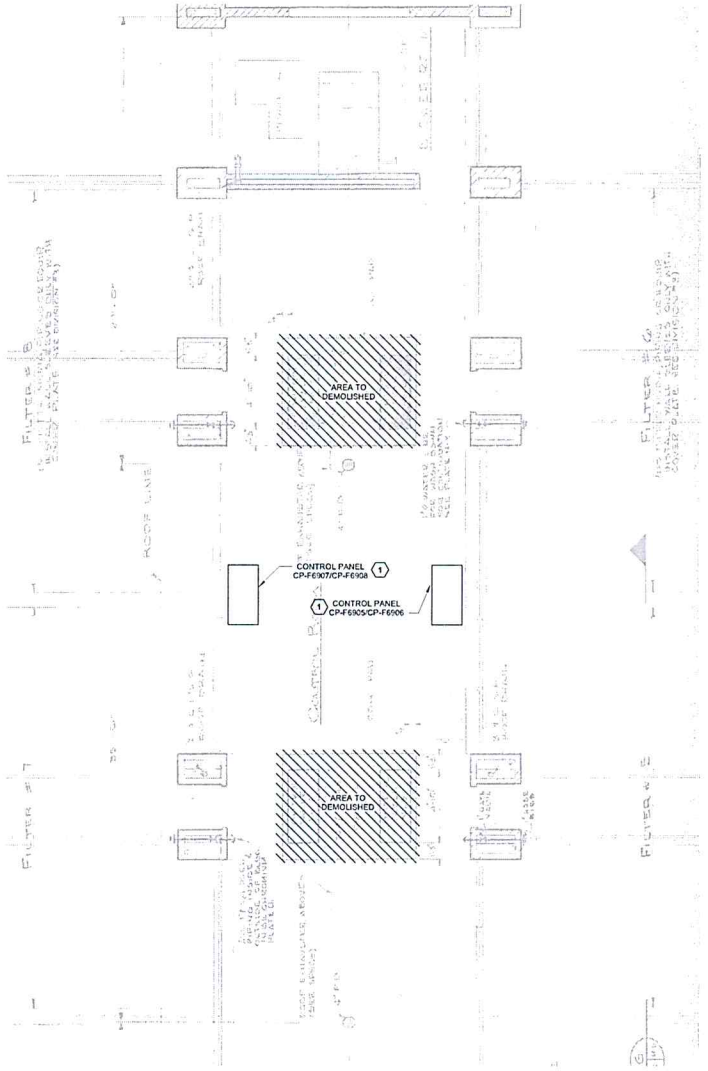

N
PLAN NORTH

1 / 69-E103 **1969 BLDG - OPERATORS FLOOR**

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

GENERAL NOTES

A. OPERATING FLOOR SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

KEYED NOTES

1. PROVIDE NEW CONTROL PANEL ENCLOSURE WITH PLC AND OIT FOR TWO FILTERS. SEE DETAIL 1 ON SHEET 95-E701 FOR CONTROL PANEL DETAILS. PROVIDE 19" HMI SCREEN IN ENCLOSURE MOUNTED ON TOP OF CONSOLE. PROVIDE 20A CIRCUIT FROM RP-69 USING 3/4"C. 2-#10 W/ #10 GND. PROVIDE 500VA UPS IN ENCLOSURE.

BARGE DESIGN SOLUTIONS

Brian W Landry

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE046693 BRIAN WILLIAM LANDRY

1969 BUILDING - FILTER OPERATIONS FLOOR - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CSM	BL	MAY 2021	30% REVIEW SUBMITTAL
B	CSM	BL	05/02/2022	OWNER AND AGENCY REVIEW

69-E103

FILE NO. 3643211

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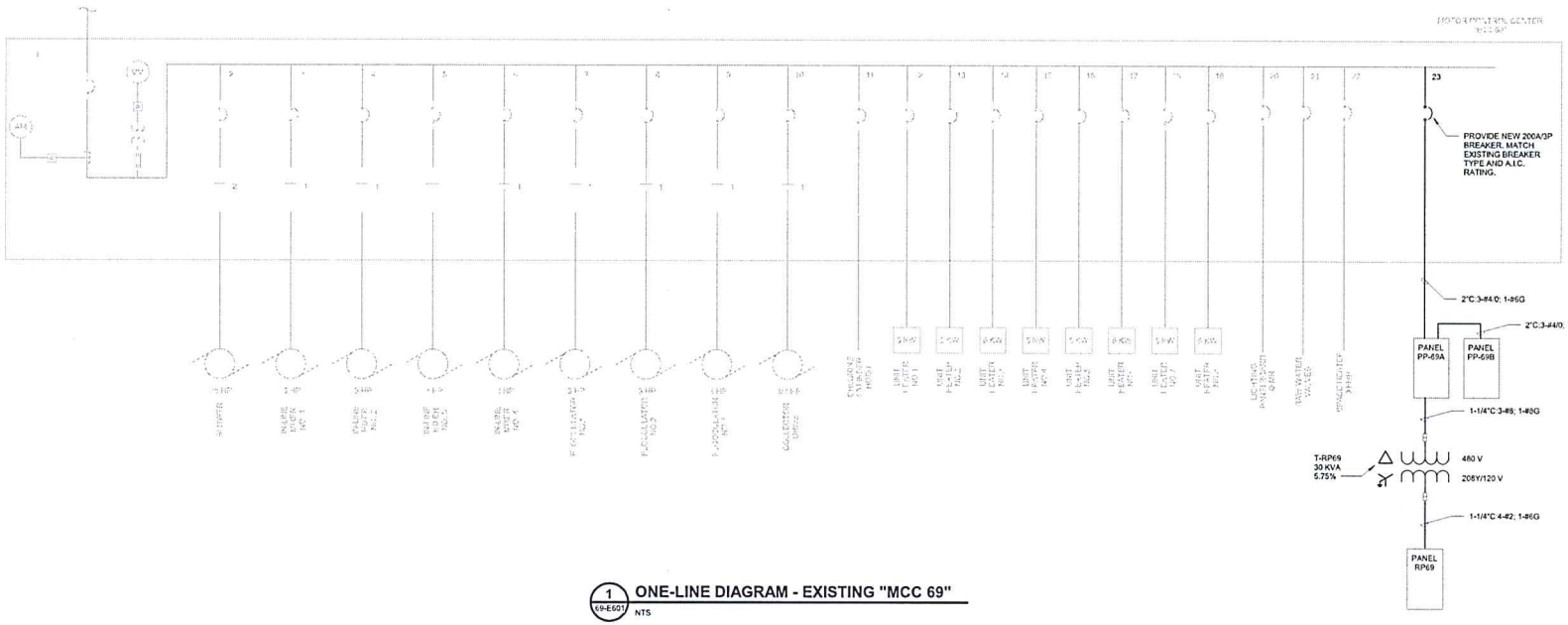
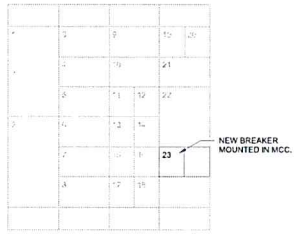


1 (69-E601) **ONE-LINE DIAGRAM - EXISTING "MCC 69"**

NTS



2 (69-E601) **EXISTING MCC "MCC69" - ELEVATION**

NTS

BARGE DESIGN SOLUTIONS

Brian W Landry

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE046893 BRIAN WILLIAM LANDRY

1969 BUILDING - ELECTRICAL SINGLE LINE DIAGRAM

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION				
REV.	DR.	CHK.	DATE	DESCRIPTION
A	CSM	BL	04/21/22	30% REVIEW REVISIONS
B	CSM	BL	05/02/22	OWNER AND AGENCY REVIEW

69-E601

FILE NO. 3643211

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PANEL: PP-69A

SERVICE: 480 VOLT, 3 PHASE, 3 WIRE
LOCATION: FILTER GALLERY

CKT NO.	DIRECTORY	ACC.	CKT. BKR.	LOAD (KVA)	A	B	C	LOAD (KVA)	CKT. BKR.	ACC	DIRECTORY	CKT. NO.
1				1	2.0			1				2
3	FV-4911, FCV-4912, FV-4913		30 / 3	1		2.0		1	30 / 3		FV-4944, FV-4945, FV-4946	4
5				1			2.0	1				6
7				1	1.5			0.5				8
9	FV-4914, FV-4915, FV-4916		30 / 3	1		1.5		0.5	30 / 3		FCV-4912	10
11				1			1.5	0.5				12
13				1	1.5			0.5				14
15	FV-4921, FCV-4922, FV-4923		30 / 3	1		1.5		0.5	30 / 3		FCV-4922	16
17				1			1.5	0.5				18
19				1	1.5			0.5				20
21	FV-4924, FV-4925, FV-4926		30 / 3	1		1.5		0.5	30 / 3		FCV-4932	22
23				1			1.5	0.5				24
25				1	1.5			0.5				26
27	FV-4931, FCV-4932, FV-4933		30 / 3	1		1.5		0.5	30 / 3		FCV-4942	28
29				1			1.5	0.5				30
31				1	6.0			5				32
33	FV-4934, FV-4935, FV-4936		30 / 3	1		6.0		5	50 / 3		T-RP-69 TRANSFORMER	34
35				1			6.0	5				36
37				1	1.0							38
39	FV-4941, FCV-4942, FV-4943		30 / 3	1		1.0			30 / 3		SPARE	40
41				1			1.0					42

BUS DATA

AMPERE RATING - CONT: 200A
SCCR: 65KA
BUS: COPPER/GROUND
TOP FEED

☐ MAIN LUGS ONLY
■ MAIN BREAKER
AF: 200A
AT: 200A

	A	B	C		
	8.0	8.0	8.0	24.0	TOTAL KVA SHOWN
				24.0	SUB-FEED KVA LOAD FROM PANEL PP-69B
	8.0	8.0	8.0	48.0	TOTAL KVA CONNECTED

ENCLOSURE
■ SURFACE ☐ FLUSH
☐ NEMA 1 ☐ NEMA 3R
■ NEMA 12 ☐

MANUFACTURER:
TYPE:

FED FROM:
NOTES:
PROVIDE FEED-THROUGH LUGS TO PP-69B

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	DIVERSIFIED LOAD
OTHER	48.0	100%	48.0
TOTAL	48.0		48.0

PANEL: PP-69B

SERVICE: 480 VOLT, 3 PHASE, 3 WIRE
LOCATION: FILTER GALLERY

CKT NO.	DIRECTORY	ACC.	CKT. BKR.	LOAD (KVA)	A	B	C	LOAD (KVA)	CKT. BKR.	ACC	DIRECTORY	CKT. NO.
1				1	2.0			1				2
3	FV-6951, 6952, 6953		30 / 3	1		2.0		1	30 / 3		FV-6971, 6972, 6973	4
5				1			2.0	1				6
7				1	2.0			1				8
9	FV-6953A, 6953B		30 / 3	1		2.0		1	30 / 3		FV-6973A, 6973B	10
11				1			2.0	1				12
13				1	2.0			1				14
15	FCV-6954, FV-6955, FV-6956A, FV-6956B		30 / 3	1		2.0		1	30 / 3		FCV-6974, FV-6975, FV-6976A, FV-6976B	16
17				1			2.0	1				18
19				1	1.0							20
21	FV-6961, 6962, 6963		30 / 3	1		1.0			30 / 3		FV-6981, 6982, 6983	22
23				1			1.0					24
25				1	1.0							26
27	FV-6963A, 6963B		30 / 3	1		1.0			30 / 3		FV-6983A, 6983B	28
29				1			1.0					30
31				1	1.0							32
33	FCV-6964, FV-6965, FV-6966A, FV-6966B		30 / 3	1		1.0			30 / 3		FCV-6984, FV-6985, FV-6986A, FV-6986B	34
35				1			1.0					36
37				1	1.0							38
39	SPARE		30 / 3	1		1.0			30 / 3		SPARE	40
41				1			1.0					42

BUS DATA

AMPERE RATING - CONT: 200A
SCCR: 65KA
BUS: COPPER/GROUND
TOP FEED

■ MAIN LUGS ONLY
☐ MAIN BREAKER
AF:
AT:

	A	B	C		
	8.0	8.0	8.0	24.0	TOTAL KVA SHOWN
					DEMAND KVA
	8.0	8.0	8.0		

ENCLOSURE
■ SURFACE ☐ FLUSH
☐ NEMA 1 ☐ NEMA 3R
■ NEMA 12 ☐

MANUFACTURER:
TYPE:

FED FROM: PP-69A FEED THROUGH LUGS
NOTES:

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	DIVERSIFIED LOAD
OTHER	24.0	100%	24.0
TOTAL	24.0		24.0

PANEL: RP-69

SERVICE: 208Y/120 VOLT, 3 PHASE, 4 WIRE
LOCATION: FILTER GALLERY

CKT NO.	DIRECTORY	ACC.	CKT. BKR.	LOAD (KVA)	A	B	C	LOAD (KVA)	CKT. BKR.	ACC	DIRECTORY	CKT. NO.
1	CP-F4901 OPERATOR CONSOLE		20 / 1	1	2.0			1	20 / 1		TURBIDITY METER - FILTER 1/2	2
3	CP-F4902 OPERATOR CONSOLE		20 / 1	1		2.0		1	20 / 1		TURBIDITY METER - FILTER 3/4	4
5	CP-F4903 OPERATOR CONSOLE		20 / 1	1			2.0	1	20 / 1		TURBIDITY METER - FILTER 5/6	6
7	CP-F4904 OPERATOR CONSOLE		20 / 1	1	2.0			1	20 / 1		TURBIDITY METER - FILTER 7/8	8
9	CP-F6905/6 OPERATOR CONSOLE		20 / 1	1		2.0		1	20 / 1		FLOW METERS	10
11	CP-F6907/8 OPERATOR CONSOLE		20 / 1	1			1.0		20 / 1		SPARE	12
13	SPARE		20 / 1		0.0				20 / 1		SPARE	14
15	SPARE		20 / 1			0.0			20 / 1		SPARE	16
17	SPARE		20 / 1				0.0		20 / 1		SPARE	18
19	SPARE		20 / 1		0.0				20 / 1		SPARE	20
21	SPARE		20 / 1			0.0			20 / 1		SPARE	22
23	SPARE		20 / 1				0.0		20 / 1		SPARE	24
25	SPARE		20 / 1		0.0				20 / 1		SPARE	26
27	SPARE		20 / 1			0.0			20 / 1		SPARE	28
29	SPARE		20 / 1				0.0		20 / 1		SPARE	30
31	SPARE		20 / 1		0.0				20 / 1		SPARE	32
33	SPARE		20 / 1			0.0			20 / 1		SPARE	34
35	SPARE		20 / 1				0.0		20 / 1		SPARE	36
37	SPARE		20 / 1		0.0				20 / 1		SPARE	38
39	SPARE		20 / 1			0.0			20 / 1		SPARE	40
41	SPARE		20 / 1				0.0		20 / 1		SPARE	42

BUS DATA

AMPERE RATING - CONT: 100A
SCCR: 10KA
BUS: COPPER/NEUTRAL/GROUND
TOP FEED

☐ MAIN LUGS ONLY
■ MAIN BREAKER
AF: 100A
AT: 100A

	A	B	C		
	4.0	4.0	3.0	11.0	TOTAL KVA SHOWN
					DEMAND KVA
	4.0	4.0	3.0		

ENCLOSURE
■ SURFACE ☐ FLUSH
☐ NEMA 1 ☐ NEMA 3R
■ NEMA 12 ☐

MANUFACTURER:
TYPE:

FED FROM:
NOTES:

Brian W Landry

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE046693 BRIAN WILLIAM LANDRY

BARGE DESIGN SOLUTIONS
610 Smith Street | Suite 700 | Houston, Texas 77002
Phone: 713.224.7311 | Fax: 713.224.8272

1969 BUILDING - ELECTRICAL SCHEDULES

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	BY	CHK.	DATE	DESCRIPTION
A	CRM	BL	MAY 2021	30% REVIEW SUBMITTAL
B	CRM	BL	3/30/2022	ISSUED AS AGENCY REVIEW

69-E901

FILE NO. 3643211

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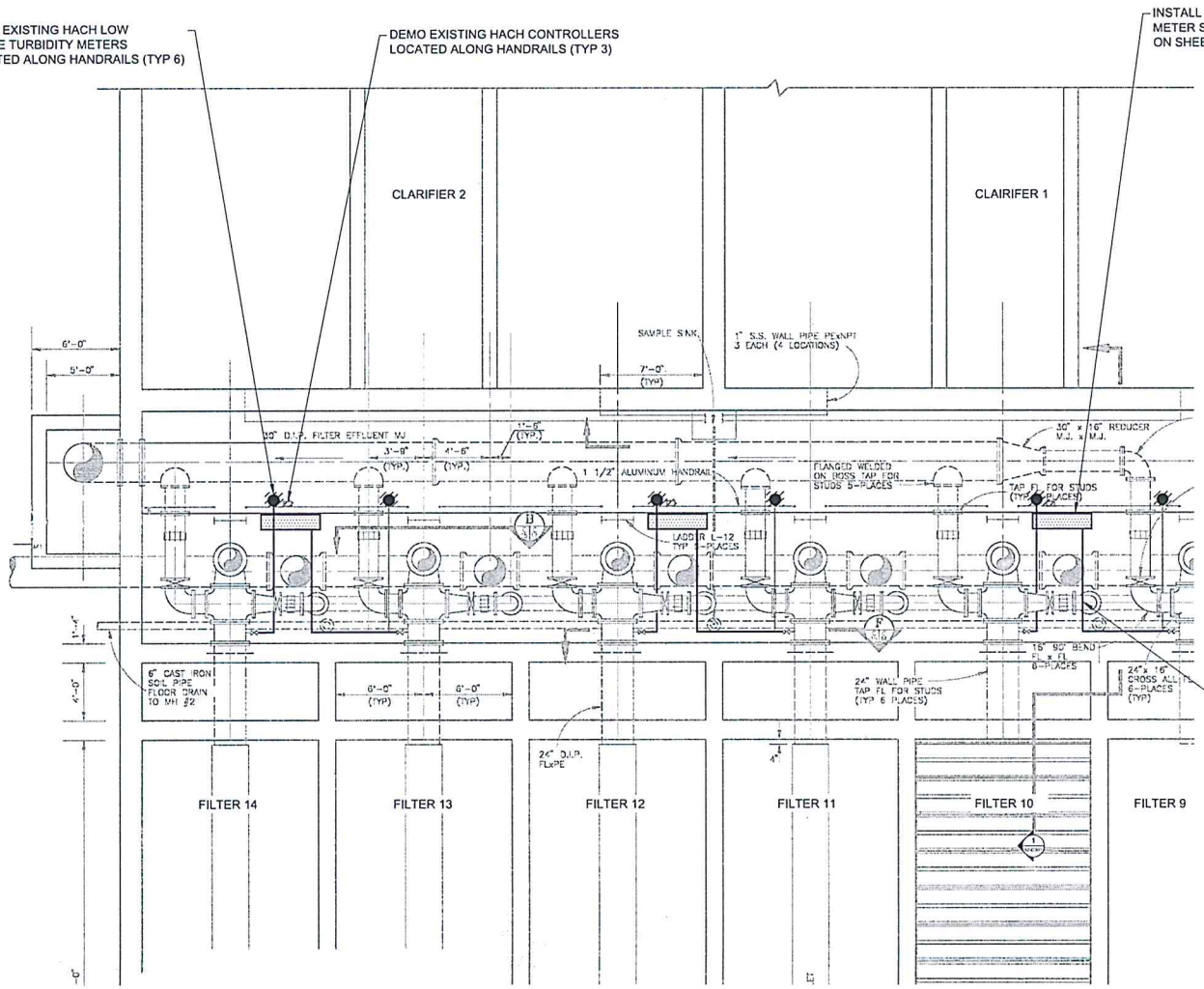
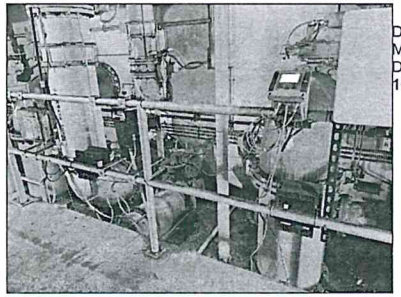
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. IN THE PIPE GALLERY REMOVED SIX (6) EXISTING HACH TURBIDITY METERS MODEL 1720E, THREE (3) HACH CONTROLLERS MODEL SC200, AND THREE (3) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.



TURBIDITY SYSTEM REPLACEMENT - PLAN

NTS



TURBIDITY SYSTEM & CONTROLLER

BARGE DESIGN SOLUTIONS

1201 Front Avenue, Suite F | Columbus, GA 31901
PHONE (706) 327-4580

Digitally signed by Michael P Alexander
Date: 2022.05.05 16:59:50-04'00'

1992 BUILDING - TURBIDITY SYSTEM REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
A	AJD	MAA	05/03/2022	90% SUBMITTAL
B	AJD	MAA	05/05/2022	CLNR & AND ZSF INCL SL CTRV

92-D101

FILE NO. 36432-11

USER:AMPANDER
FILE:C:\ACADSTM\36432\11\04_CAD WATR\36432\11_92-D101_1992 Turbidity Meter Replacement Plan.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

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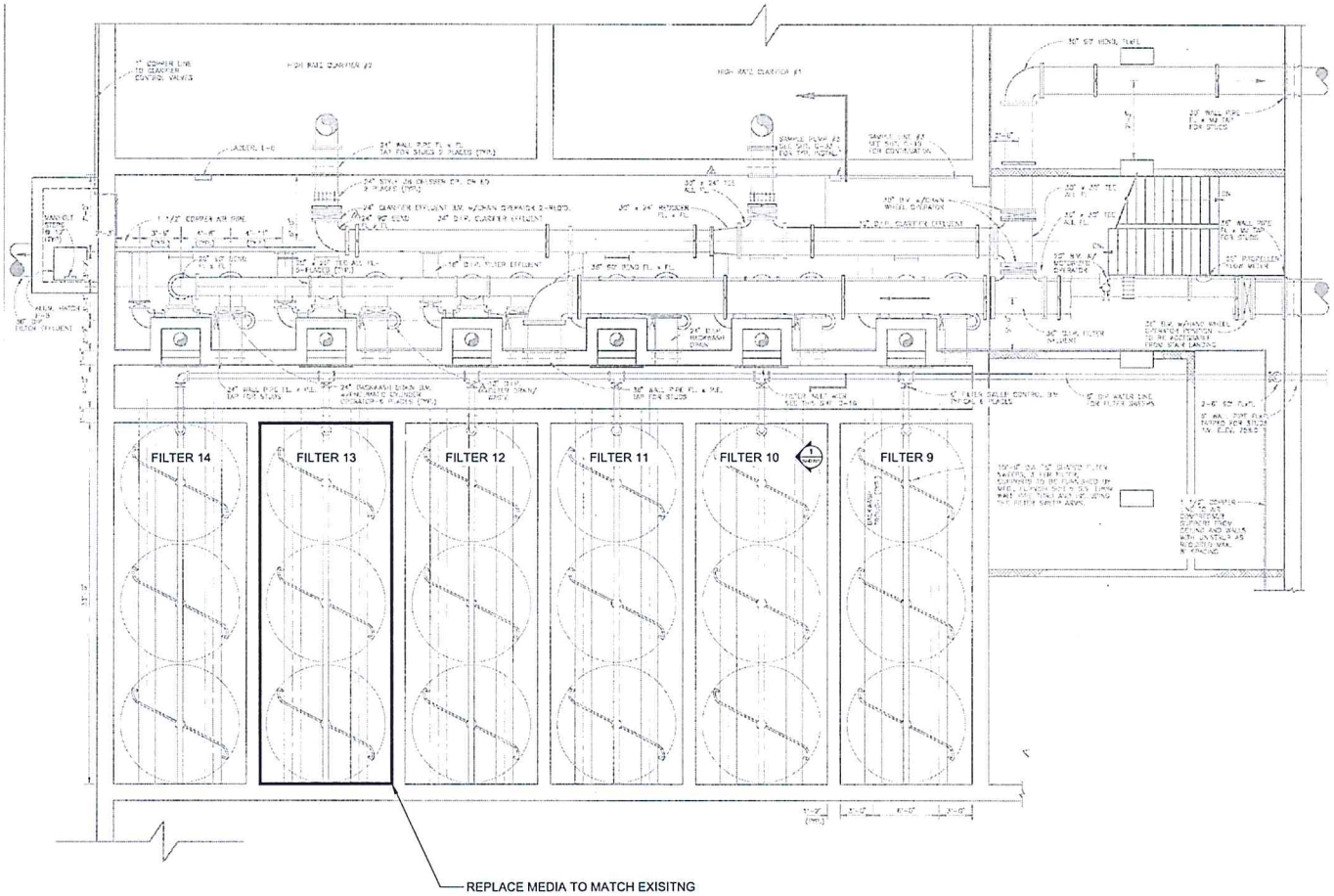
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.



1 FILTER PIPE GALLERY PLAN
SCALE: 3/16" = 1'-0"

0 1' 2' 4' 8'

BARGE DESIGN SOLUTIONS

Digitally signed by Michael D Alexander
Date: 2022.05.05 16:59:59-04'00'

1992 BUILDING - FILTER PIPE GALLERY - PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REVISION DESCRIPTION			
REV.	DR.	CHK.	DATE	DESCRIPTION
A	MDB	MA	04/22/2022	75% DESIGN SUBMITTAL
B	AD	MA	04/22/2022	OWNER AND AGENCY REVIEW

92-D102

FILE NO. 36432-11

USER:AMPARKER
FILE:F:\36432\36432\21100_CAD\WATR\36432\1_92-D102_1992 Filter Plant Plan.dwg
SAVED:5/5/2022
PLOTTED:5/5/2022

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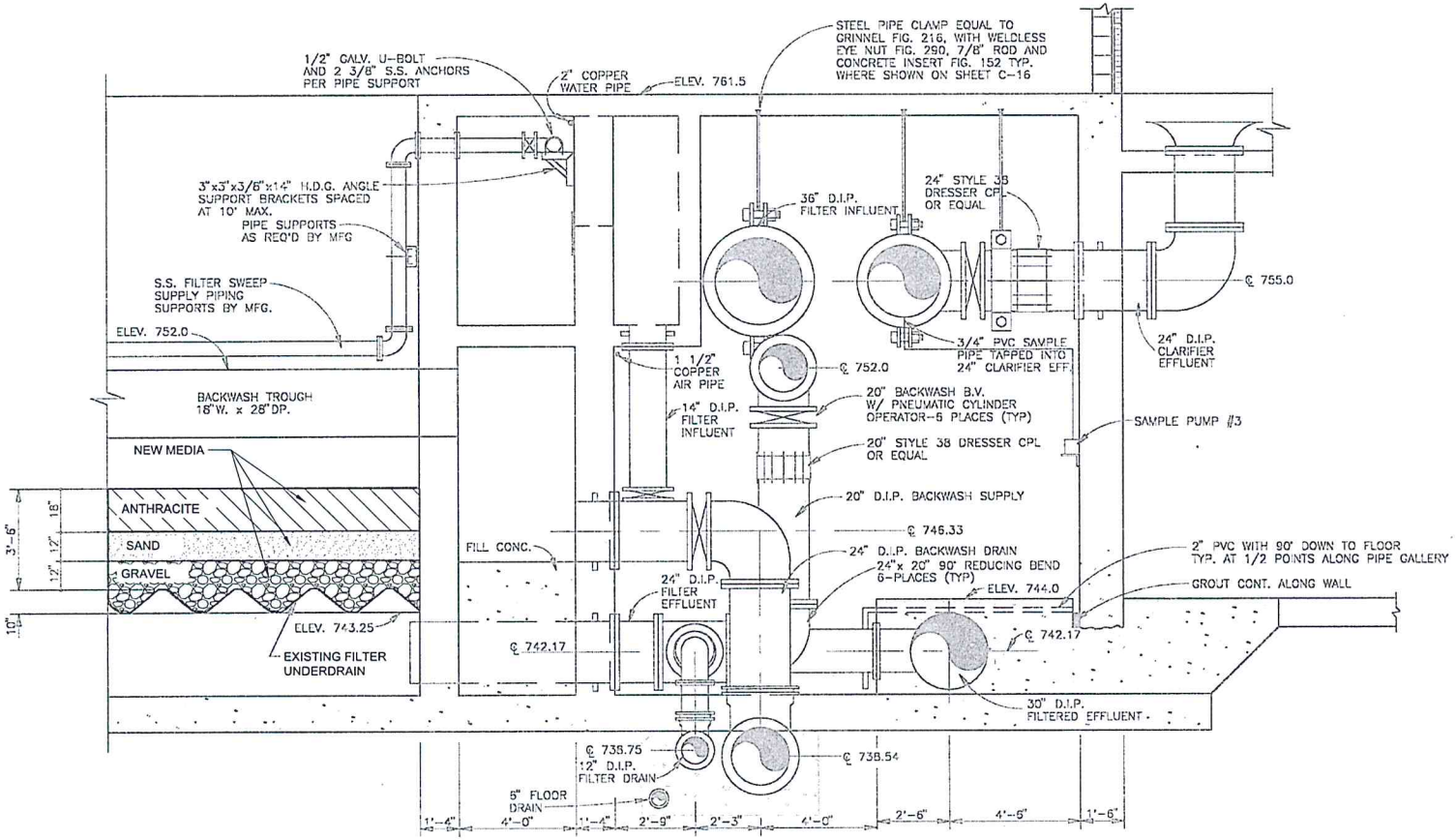
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.

2. REPLACE MEDIA IN FILTER 13.

FILTER 13



1 / 92-D102 FILTER PIPE GALLERY - SECTION

SCALE: 1/2" = 1'-0"

0 6" 1' 2' 4'

BARGE DESIGN SOLUTIONS

1217 First Avenue S Suite F | Columbus, GA 31901
PHONE (706) 327-4580

GEORGIA REGISTERED PROFESSIONAL ENGINEER 24355 MICHAEL D. ALEXANDER

Digitally signed by Michael D Alexander
Date: 2022.05.05 17:00:09-04'00'

1992 BUILDING - FILTER PIPE GALLERY - SECTION

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR	DN	REVISIONS/REFERENCE ITEM
A	AJD	EA	MAY 2021 - 50% REVIEW SUBMITTAL
B	AJD	MA	05/02/2022 - OWNER AND AUTHORITY REVIEW

92-D301

FILE NO. 36432-11

USER: AMPARKER
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SAVED: 5/2022
PLOTTED: 5/5/2022

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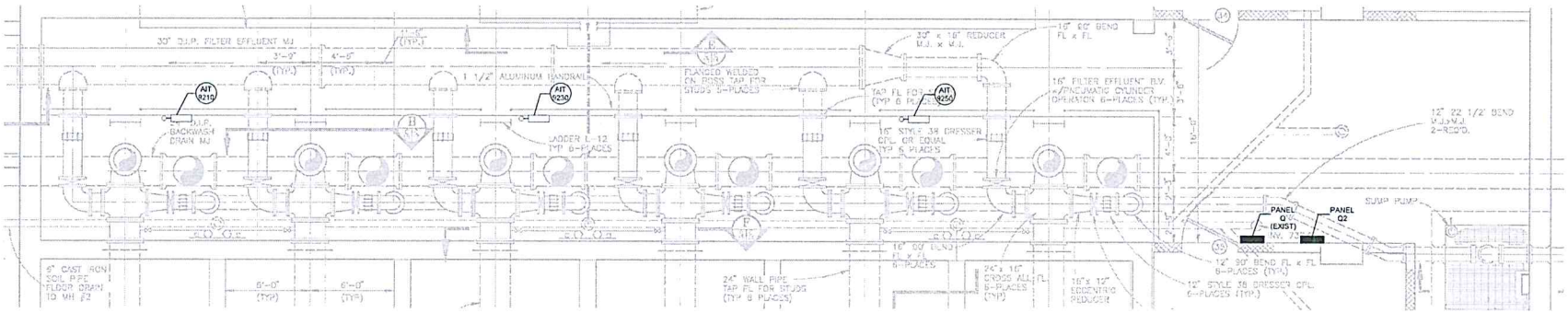

N
PLAN NORTH

1 (92-E101) PIPE GALLERY (ELEV. 745) - ELECTRICAL PLAN

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

GENERAL NOTES

A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.

B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

C. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.

D. PROVIDE NEW JUNCTION BOX AT EXISTING TURBIDITY METER LOCATION FOR POWER AND CONTROL WIRING. EXTEND CONDUIT FOR POWER AND CONTROL TO NEW METER LOCATION. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-49 TO EACH TURBIDITY METER. PROVIDE NEW CONTROL WIRING FROM METER TO NK4 CABINET. PROVIDE (2) #16 TWISTED SHIELDED PAIR (TSP) CABLE FROM EACH TURBIDITY METER TO NK4 CABINET.

BARGE DESIGN SOLUTIONS

Brian W Landry

GEORGIA REGISTERED No. PE046893 PROFESSIONAL ENGINEER BRIAN WILLIAM LANDRY

1992 BUILDING - PIPE GALLERY ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CDM	BL	MAY 2021	30% REVIEW SUBMITTAL
B	CDM	BL	06/03/2022	OWNER AND AGENCY REVIEW

92-E101

FILE NO. 3643211

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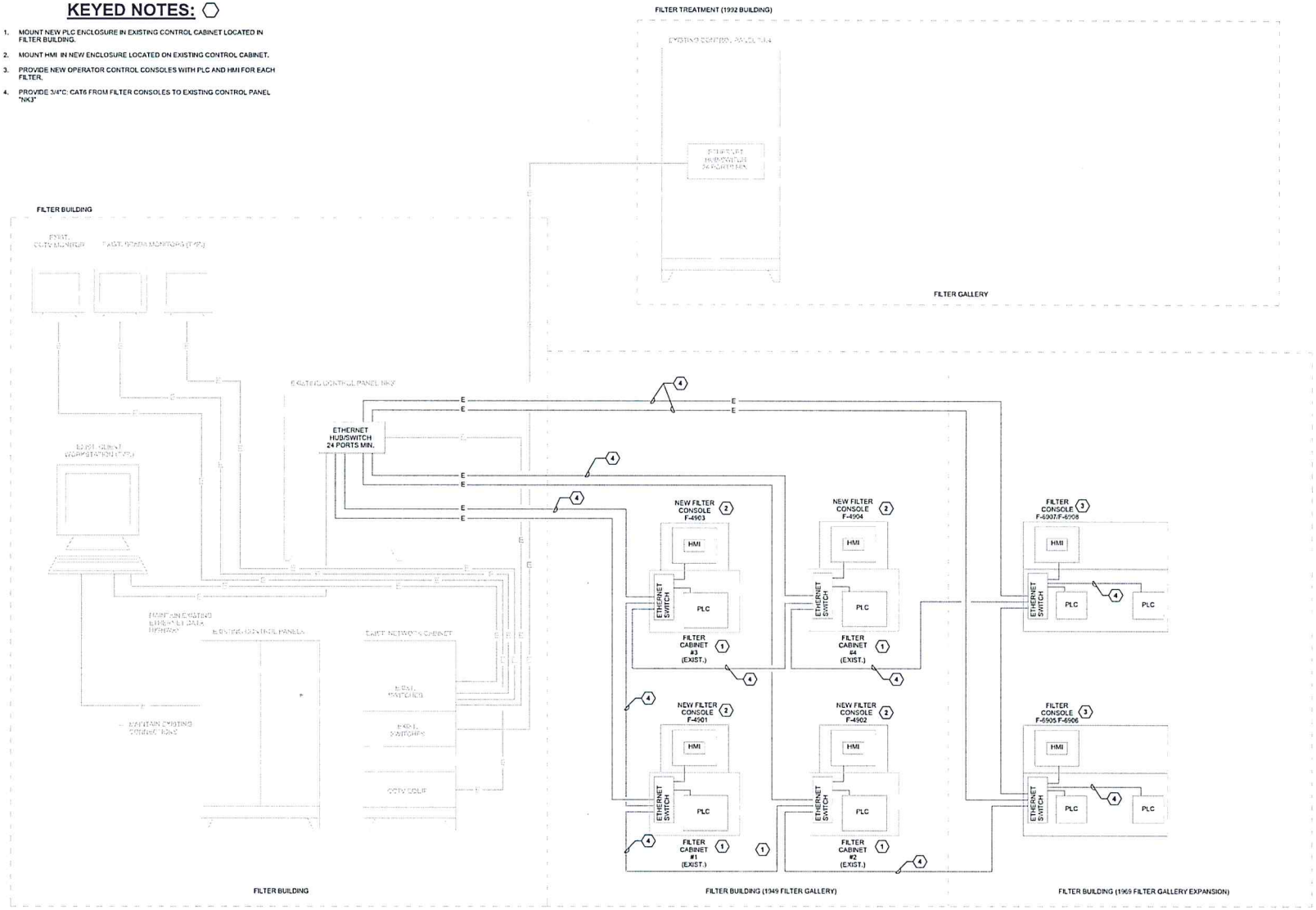
KEYED NOTES:

1. MOUNT NEW PLC ENCLOSURE IN EXISTING CONTROL CABINET LOCATED IN FILTER BUILDING.
2. MOUNT HMI IN NEW ENCLOSURE LOCATED ON EXISTING CONTROL CABINET.
3. PROVIDE NEW OPERATOR CONTROL CONSOLES WITH PLC AND HMI FOR EACH FILTER.
4. PROVIDE 3/4"C. CAT6 FROM FILTER CONSOLES TO EXISTING CONTROL PANEL "NK3"



1 95-E601 **SCADA NETWORK - SINGLE LINE DIAGRAM**
NTS

BARGE DESIGN SOLUTIONS

Brian W Landry

WTP SCADA NETWORK - SINGLE LINE DIAGRAM

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CDM	BL	MAY 2021	30% IFC/IUV SUBMITTAL
B	CDM	BL	05/26/2022	OWNER AND AGENCY REVIEW

95-E601

FILE NO. 3643211

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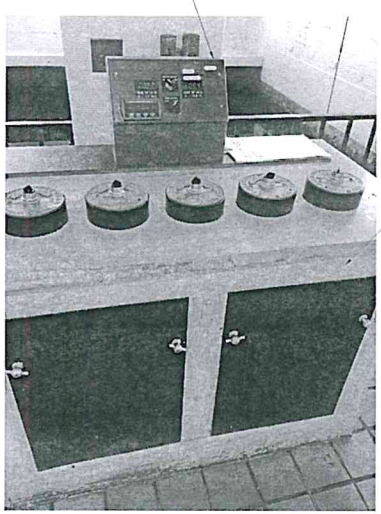
ENCLOSURE SPECIFICATIONS

HEIGHT: 60"
WIDTH: 48"
DEPTH: 24"

1 / 95-E701 **CP-F4905/06 AND CP-F4907/08**



2 / 95-E701 **CP-F4901 THROUGH CP-F4904 TYPICAL**

BARGE DESIGN SOLUTIONS

Brian W Landry

REGISTERED PROFESSIONAL ENGINEER No. PE044693 BRIAN WILLIAM LANDRY

ELECTRICAL DETAILS

WALT WILLIAMS FILTRATION PLANT
FILTER VALVES REPLACEMENT
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
A	CTH	BL	MAY 2021	90% REVIEW SUBMITTAL
B	CTH	BL	9/22/2022	100% REVIEW AND BIDDING SET

95-E701

FILE NO. 3643211

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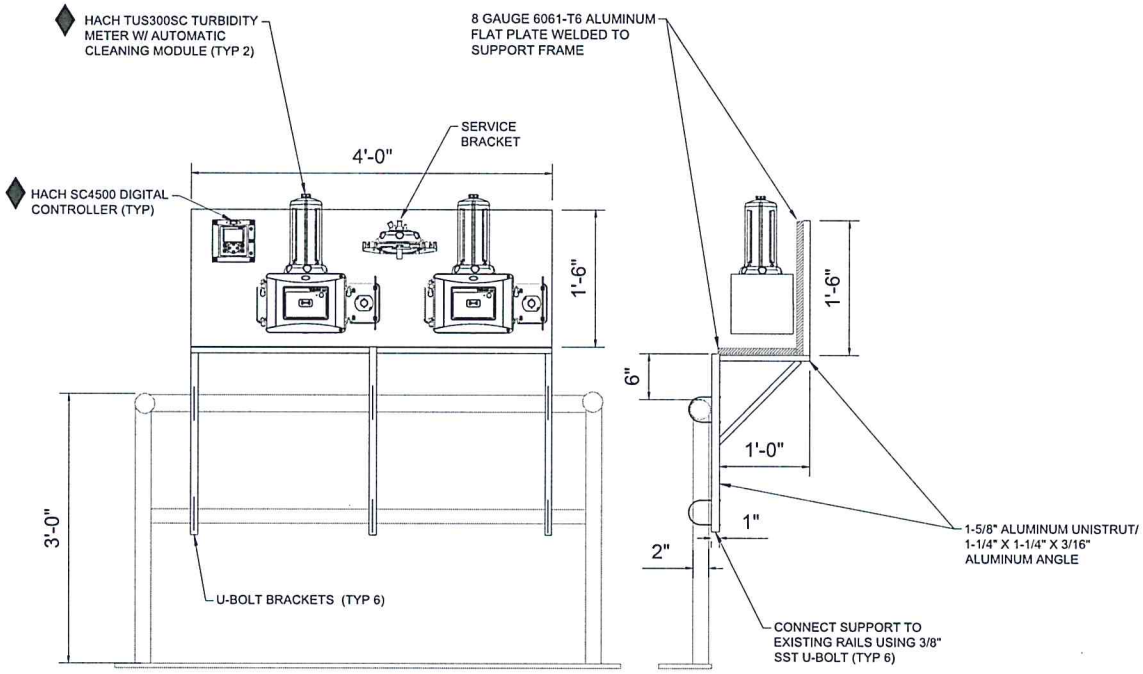
NOTES:

1. REFER TO SPECIFICATION 40 75 50 AND THE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.
2. DRILL PANEL FOR INSTRUMENT MOUNTING BRACKETS.
3. SMOOTH AND ROUND ALL CORNERS AND EDGES AND TRIM ALL FASTENERS.
4. REPLACE ALL SAMPLE PIPING AND APERTURES WITH NEW 1/2" COPPER OR STAINLESS STEEL PIPING. ROUND ALL NEW SAMPLING LINES ALONG PIPING AND WALKWAYS.
5. ROUTE ALL SAMPLE DRAIN LINES FROM THE TURBIDITY METERS TO THE EXISTING FLOOR DRAINS

◆ SUPPLIED BY OWNER



1 TURBIDITY SYSTEM DETAIL

SCALE: 1-1/2" = 1'-0"

0 3" 6" 1' 2'

BARGE DESIGN SOLUTIONS

1201 Front Avenue | Suite F | Columbus, GA 31901
PHONE (706) 327-0002

GEORGIA REGISTERED PROFESSIONAL ENGINEER

Digitally signed by Michael L Alexander
Date: 2022.05.05 17:00:19-04'00'

TURBIDITY SYSTEM DETAIL

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV	DR.	CHK.	DATE	DESCRIPTION
A	AMS	MA	MAY 2021	30% REVIEW SUBMITTAL
B	AMS	MA	05/05/2022	100% REVIEW SUBMITTAL

99-D101

FILE NO. 36432-11

USER: AMPARKER
FILE: F:\36432\36432\T04_CAD\WATR\364321T04_99-D101_Detail.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022

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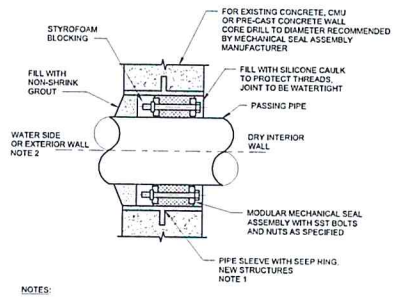
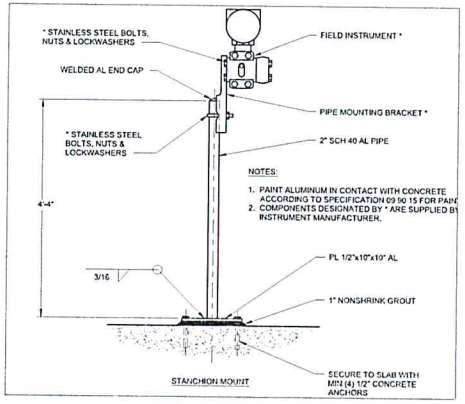


NOTES:

1. WHERE EXISTING CONCRETE STRUCTURE IS TO BE CORE DRILLED, ULTRASONIC TEST OR X-RAY THE AREA FOR EMBEDDED ITEMS BEFORE CORE DRILLING. IF EMBEDDED ITEMS ARE FOUND, NOTIFY THE ENGINEER IMMEDIATELY.
2. WHERE PIPE PASSES THROUGH INTERIOR WALL, GROUT IS NOT REQUIRED.

1 WALL PIPE PENETRATION SEAL

NTS



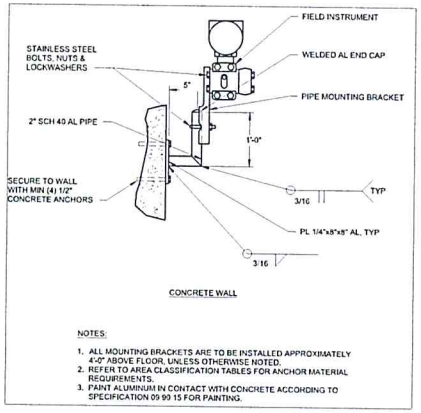
NOTES:

1. PAINT ALUMINUM IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATION 09 90 15 FOR PAIN
2. COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.

STANCHION MOUNT

2 FIELD INSTRUMENT MOUNTING - STANCHION

NTS



CONCRETE WALL

NOTES:

1. ALL MOUNTING BRACKETS ARE TO BE INSTALLED APPROXIMATELY 4'-0" ABOVE FLOOR, UNLESS OTHERWISE NOTED.
2. REFER TO AREA CLASSIFICATION TABLES FOR ANCHOR MATERIAL REQUIREMENTS.
3. PAINT ALUMINUM IN CONTACT WITH CONCRETE ACCORDING TO SPECIFICATION 09 90 15 FOR PAINTING.

3 FIELD INSTRUMENT MOUNTING - WALL

NTS

BARGE DESIGN SOLUTIONS
1201 Front Avenue S.W. Suite F | Columbus, GA 31901
PHONE (706) 324-5481

REGISTERED PROFESSIONAL ENGINEER
GEORGIA
Michael Q. Alexander
24884

Digitally signed by Michael Q Alexander
Date: 2022.05.05 17:00:28-04'00'

STANDARD DETAILS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	DSN.	DWN.	DATE	REVISION
A	KHD	MA	MAR 2021	90% REVIEW SUBMITTAL
B	JD	MA	05/05/2022	DWNG & AND ADDENDA REVISION

99-D102

FILE NO. 36432-11

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USER:AMORRISB
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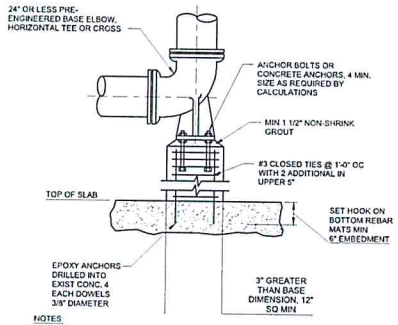
SAVED 5/5/2022
PLOTTED 5/5/2022

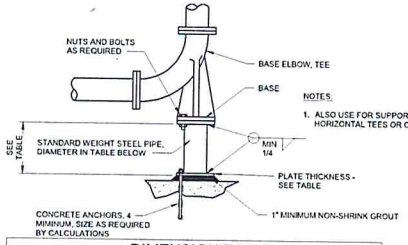


NOTES:

1. SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
2. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.

1 BASE BEND 1

NTS



NOTES:

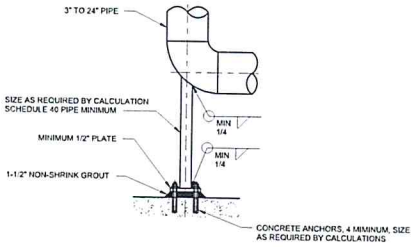
1. ALSO USE FOR SUPPORT OF HORIZONTAL TEES OR CROSS.

DIMENSION TABLE

PIPE SIZE	SUPPORT DIAMETER	PLATE		ANCHOR BOLT DIAMETER
		DIAMETER	THICKNESS	
3"	1-1/2"	5"	3/8"	3/8"
4"	2"	6"	3/8"	3/8"
6"	3"	7"	3/8"	3/8"
8" AND 10"	4"	9"	1/2"	1/2"
12" THRU 16"	6"	11"	1/2"	1/2"
18" THRU 24"	8"	13-1/2"	5/8"	5/8"
30"	10"	16"	5/8"	5/8"
36"	12"	19"	5/8"	5/8"
42"	16"	23-1/2"	3/4"	3/4"
48"	18"	25"	3/4"	3/4"
54"	20"	30"	3/4"	3/4" (USE 6)
60"	24"	32"	3/4"	3/4" (USE 6)

2 BASE BEND 2

NTS

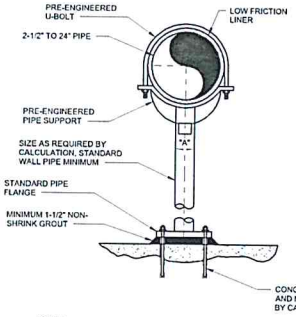


NOTES:

1. MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES IF REQUIRED BY CALCULATIONS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

3 PIPE SUPPORT

NTS



DIMENSION TABLE

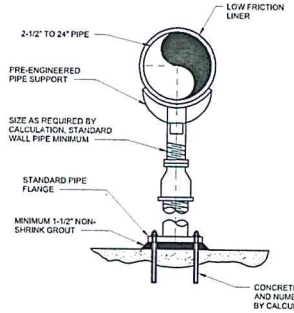
PIPE SIZE	"A" MINIMUM NOMINAL PIPE SIZE
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
16"	3"
18"	3"
20"	4"
24"	4"

NOTES:

1. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
2. FOR SUPPORTS NOT LOCATED ON SLAB, PROVIDE D" x D" x 8" SQUARE FOOTING, WHERE D IS PIPE DIAMETER, W/ #4@12" E.W. MINIMUM FOOTING DIMENSIONS: 12" x 12" x 8".

4 SADDLE SUPPORT PEDESTAL TYPE - NON-ADJUSTABLE

NTS



DIMENSION TABLE

PIPE SIZE	"A" MINIMUM NOMINAL PIPE SIZE
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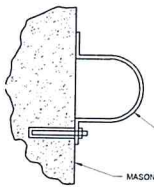
NOTES:

1. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
2. FOR SUPPORTS NOT LOCATED ON SLAB, PROVIDE D" x D" x 8" SQUARE FOOTING, WHERE D IS PIPE DIAMETER, W/ #4@12" E.W. MINIMUM FOOTING DIMENSIONS: 12" x 12" x 8".

5 SADDLE SUPPORT PEDESTAL TYPE - ADJUSTABLE

NTS



NOTES:

1. ONLY FOR VERTICAL PIPES.
2. NOT FOR USE ON CEILINGS OR BOTTOMS OF BEAMS.
3. PROVIDE PIPE PROTECTION BARRIER AS SPECIFIED. FABRICATE OVERSIZE STRAP WHERE REQUIRED.
4. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

6 PIPE SUPPORT - WALL MOUNT

NTS

BARGE DESIGN SOLUTIONS

1201 Front Avenue & Third | Columbus, GA 31901
PHONE (706) 324-4856

Digitally signed by Michael P. Alexander
Date: 2022.05.05 17:00:37-04'00'

STANDARD DETAILS

WALT WILLIAMS FILTRATION PLANT
FILTER REHABILITATION
LAGRANGE, GEORGIA

REV.	CR	CHK.	REVISION DESCRIPTION	DATE
A	KMD	MA	30% PETER'S SUBMITTAL	MAY 2021
B	JD	MA	OWNER AND AGENCY REVIEW	05/05/2022

REVISION KEY (ORIGINAL TITLE BLOCK)

99-D103

FILE NO. 36432-11

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USER: AMPARKER
FILE: J:\36432\04-12111.04_CAD WATER\04-12111_99-D103_Standard Detail.dwg
SAVED: 5/5/2022
PLOTTED: 5/5/2022