

THE MUNICIPALITY OF WEST ELGIN  
RODNEY WPCP UPGRADES  
2021

TENDER NO. 215817

## LIST OF DRAWINGS

CS COVER SHEET

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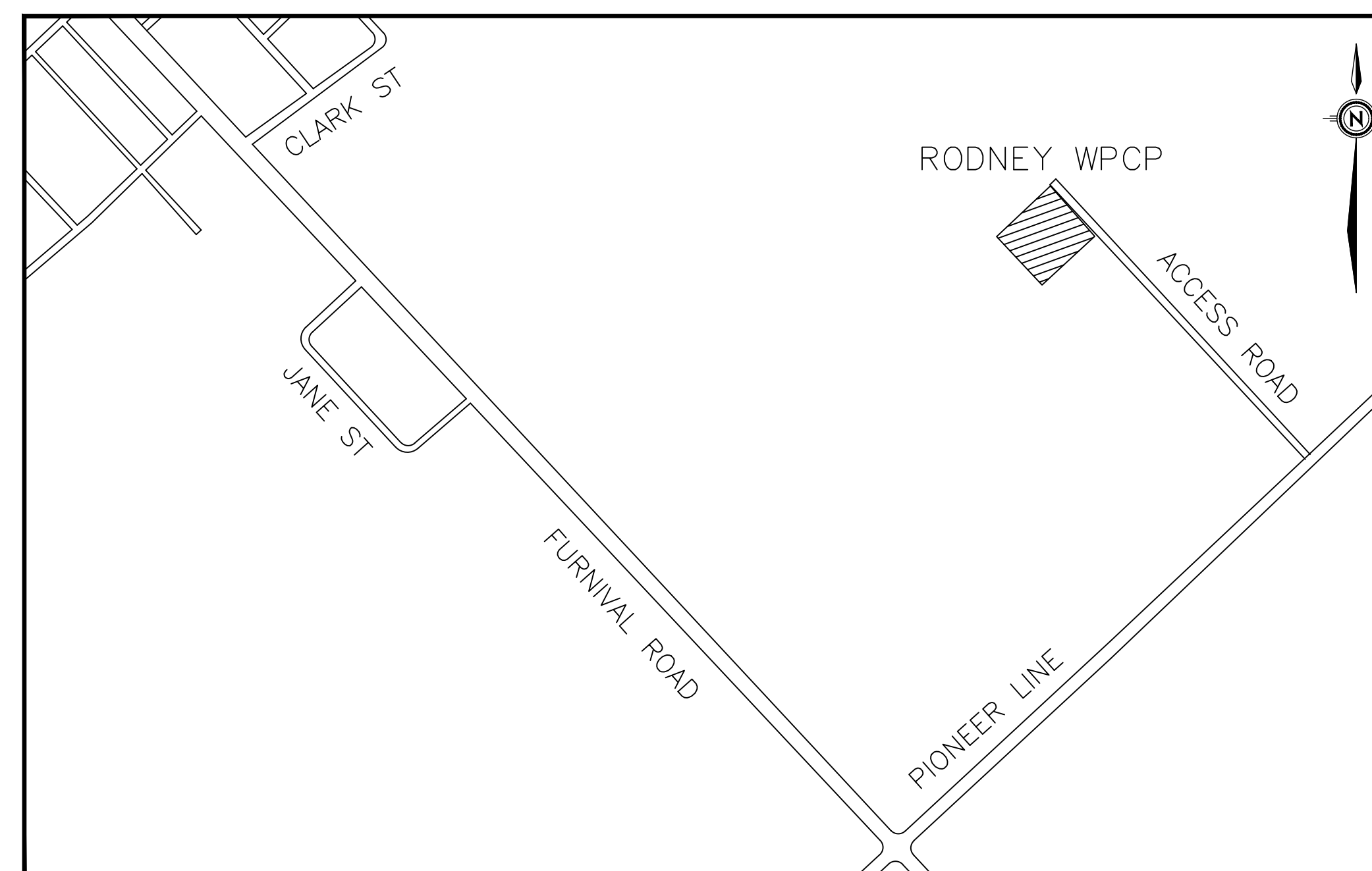
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RODNEY



MUNICIPALITY OF  
**West Elgin**















**R.V. Anderson Associates Limited**  
engineering • environment • infrastructure

ISSUED FOR 50% CLIENT REVIEW  
 ISSUE DATE: 2022/04/22

GENERAL NOTES:

1. ALL PLANS, SKETCHES, DRAWINGS, GRAPHIC REPRESENTATION PREPARED BY R.V. ANDERSON ASSOCIATES LIMITED ARE INSTRUMENTS OF SERVICE FOR CARRYING OUT A PROJECT. R.V. ANDERSON ASSOCIATES LIMITED RETAINS COPYRIGHT OF THESE PLANS, SKETCHES, DRAWINGS, GRAPHIC REPRESENTATIONS AND SPECIFICATIONS, WHICH MAY NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF R.V. ANDERSON ASSOCIATES LIMITED.
2. EXAMINE THE DRAWINGS CAREFULLY BEFORE COMMENCING THE WORK. REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER AND OBTAIN CLARIFICATION OF ADDITIONAL INSTRUCTIONS BEFORE PROCEEDING WITH THAT PART OF THE WORK.
3. DRAWINGS TO BE READ IN CONJUNCTION WITH CONTRACT SPECIFICATIONS.
4. SEWER GRADIENTS ARE PROVIDED FOR GUIDANCE PURPOSES. THE CONTRACTOR IS TO VERIFY AND TO WORK TO THE EXISTING AND NEW INVERT ELEVATIONS.
5. THE LOCATION OF THE EXISTING UTILITIES AND SERVICES IS APPROXIMATE ONLY. THE MUNICIPALITY OF WEST ELGIN AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF EXISTING UTILITIES AS INDICATED ON THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THE UNDERGROUND SERVICES LOCATED PRIOR TO ANY EXCAVATION OR CONSTRUCTION, PERFORMING TEST EXCAVATIONS, AS REQUIRED TO DETERMINE THE TRUE LINE AND ELEVATION, PRIOR TO SUBMISSION OF SHOP DRAWINGS.
6. THE CONTRACTOR WILL ENSURE THAT ALL EXISTING SERVICES ARE CLEARLY MARKED ON SITE, AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL SERVICES/UTILITIES DURING CONSTRUCTION. ALL WORK IN THE VICINITY OF EXISTING SERVICES WILL BE TO THE REQUIREMENTS OF UTILITY PROVIDED STANDARDS. CONTRACTOR TO COORDINATE WITH SPECIFIC UTILITY ORGANIZATIONS OR WITH THE OWNER.
7. MAINTAIN IN SERVICE ALL EXISTING UTILITY SERVICES AND STRUCTURES WITHIN THE WORK AREA, THROUGHOUT THE CONSTRUCTION. INSTALL SUPPORTS, AS REQUIRED. SUPPORT EXISTING SERVICES THROUGH CROSSINGS AND CONNECTION POINTS. REINSTATE BEDDING AND BACKFILL TO ORIGINAL CONDITIONS.
8. TEMPORARILY REMOVE ANY TREES/SHRUBS, ETC. , AS REQUIRED. REINSTATE THEM IN LOCATIONS DEFINED AFTER CONSTRUCTION. PROTECT IF LEFT IN PLACE.
9. REINSTATE THE ENTIRE AREA AFFECTED BY THE CONSTRUCTION ACTIVITIES.
10. WRAP ALL DIRECT BURIED VALVES, BURIED FLEXIBLE COUPLINGS AND ADJACENT EXPOSED METAL PIPE SURFACES, ON EITHER SIDE, IN A TAPECOAT TC ENVIROCOAT SYSTEM (DISTRIBUTED BY RPH DISTRIBUTORS LTD.) OR DENSO.
11. ALL DIMENSIONS TO BE FIELD VERIFIED BY CONTRACTOR.
12. ALL EXCAVATIONS FOR PIPING, CHAMBERS STRUCTURES AND OTHERS YARD WORK TO INCLUDE DEWATERING, PROVIDE AND SET IN PLACE ALL NECESSARY EQUIPMENT, DRAINAGE WELLS ETC. PRIOR TO COMMENCEMENT OF THE INSTALLATION. DEWATERING FLOWS MUST BE SETTLED (SEDIMENTATION POND OR OTHER MEANS), PRIOR TO DISCHARGE.
13. REMOVE AND DISPOSE OFF-SITE ALL EXCAVATED MATERIAL. NO MATERIAL SHALL BE REUSED.
14. INSTALL SEDIMENTATION SILTATION CONTROLS AROUND ALL AREAS DISTURBED BY THE CONSTRUCTION. REMOVE ALL SILTATION CONTROLS AND RESTORE ALL EXISTING UTILITIES, PAVED AREAS, DRIVEWAYS, SODDED/SEEDED AREAS, FENCES, ETC. TO ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION.
15. THE INVERTS OF THE EXISTING MANHOLES ARE APPROXIMATE. PERFORM SURVEY AND TEST EXCAVATION TO DETERMINE THE EXACT LOCATION, SIZE AND INVERT OF THE EXISTING PIPING AT THE PROPOSED POINT OF CONNECTION AND PROVIDE THE INFORMATION TO THE ENGINEER TO CONFIRM THE DESIGN. DO NOT SUBMIT SHOP DRAWINGS AND DO NOT ORDER CHAMBERS AND PIPE UNTIL THE DESIGN IS CONFIRMED.

LEGENDS:

HP		HYDRO POLE	HP		EXISTING HYDRO POLE
MH		MANHOLE	MH		EXISTING MANHOLE
CB		CATCH BASIN	CB		EXISTING CATCH BASIN
FH		FIRE HYDRANT	FH		EXISTING FIRE HYDRANT
EH		EFFLUENT HYDRANT	EH		EXISTING EFFLUENT HYDRANT
		TREES			EXISTING TREES

NOTE: NOT ALL SYMBOLS SHOWN NECESSARILY APPEAR IN DRAWINGS



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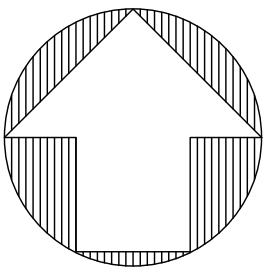
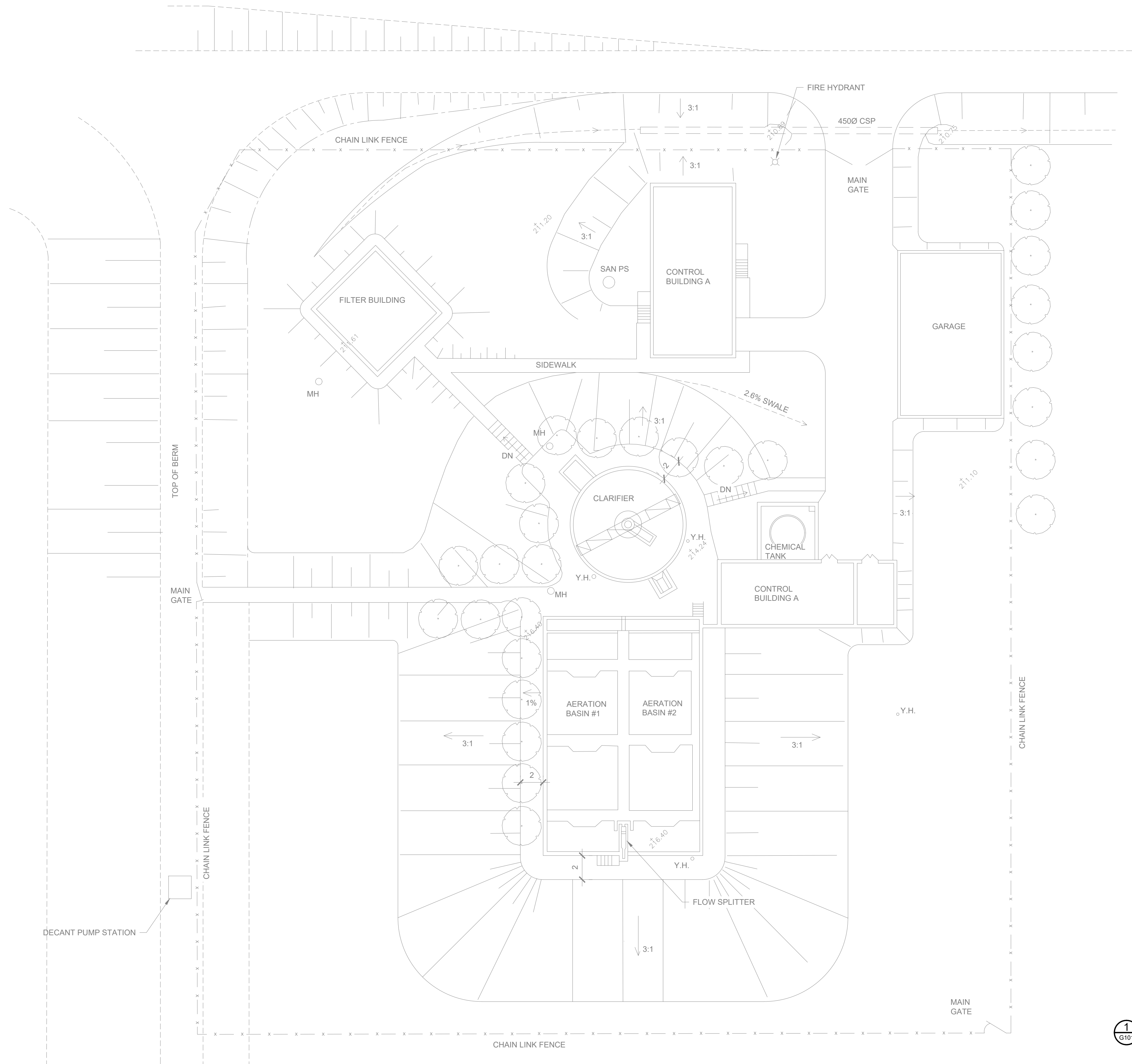


RODNEY WPCP UPGRADES

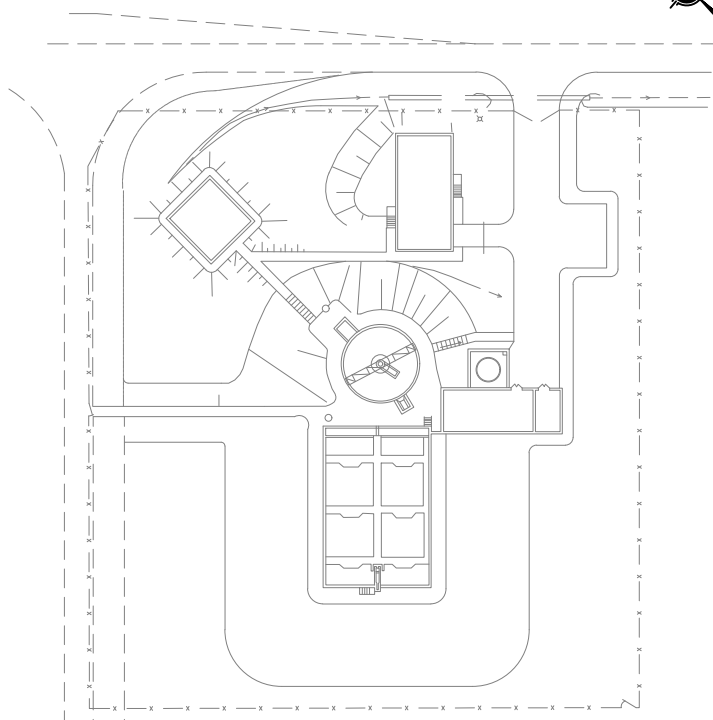
LEGENDS & ABBREVIATIONS

GENERAL NOTES & STANDARD DETAILS

Scale: AS SHOWN		RVA Project No:  215817
Date: Apr-22		
Drawn by: DG/OK	Designed by: MEH	DWG NO.  G100
Checked by: DME	Approved by: AIM	



1 EXISTING SITE PLAN



00	ISSUED FOR 50% CLIENT REVIEW			22/04/22	AIM
No.	REVISION			DATE	BY
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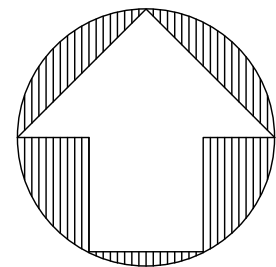
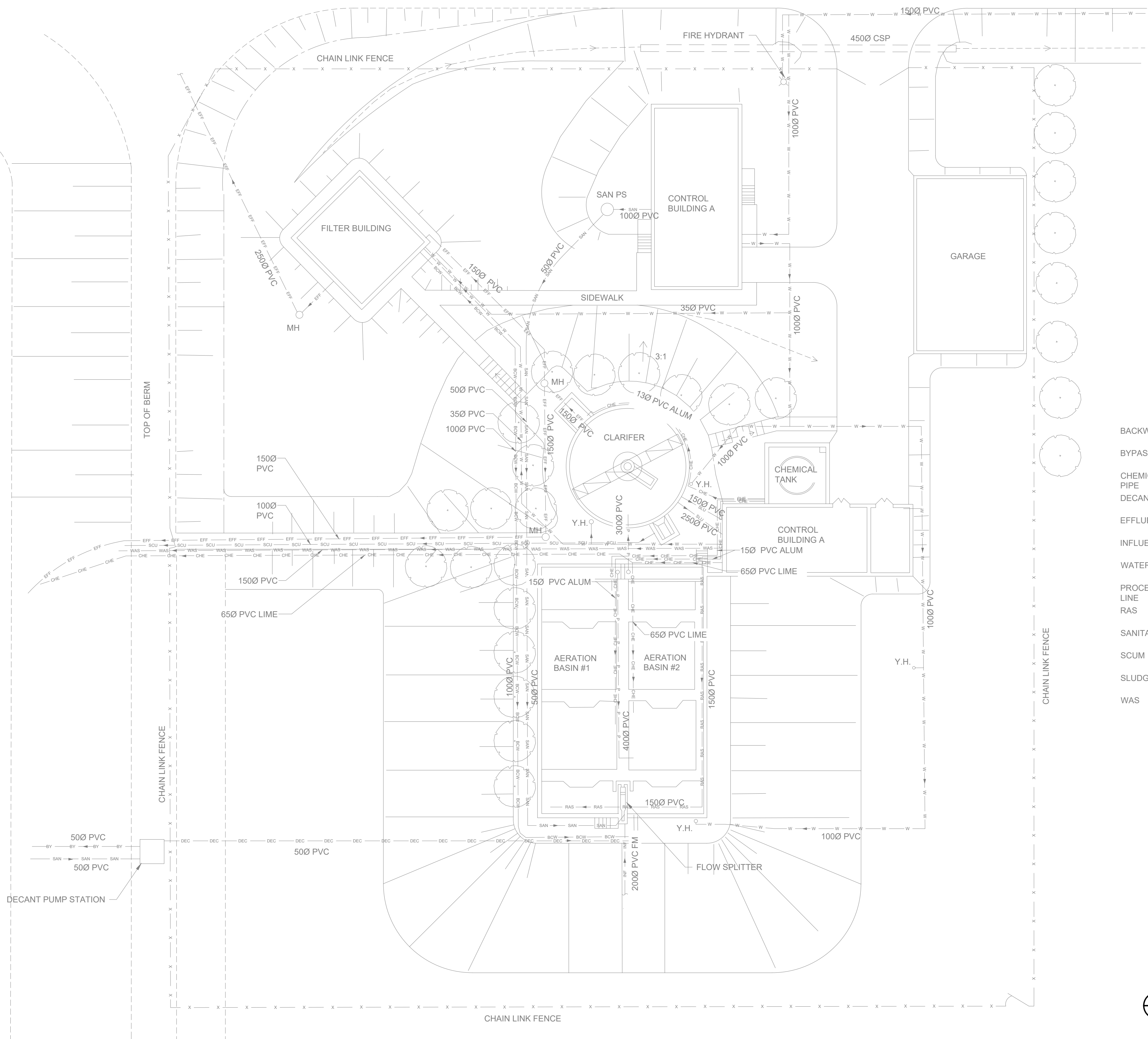
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GENERAL		
EXISTING SITE PLAN		
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Date: Apr-22		215817
Drawn by: DG/OK	Designed by: MEH	DWG NO.
Checked by: DME	Approved by: AIM	
		G101

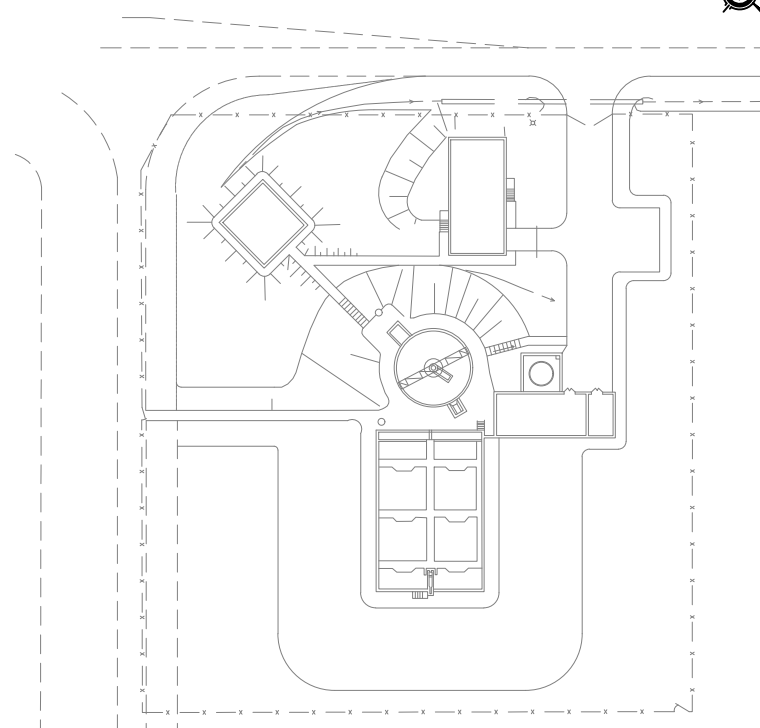




LEGENDS

BACKWASH	BCW
BYPASS	BY
CHEMICAL PIPE	CHE
DECANT	DEC
EFFLUENT	EFF
INFLUENT	INF
WATER	W
PROCESS LINE	P
RAS	RAS
SANITARY	SAN
SCUM	SCU
SLUDGE	SLU
WAS	WAS

1 G102 EXISTING YARD PIPING



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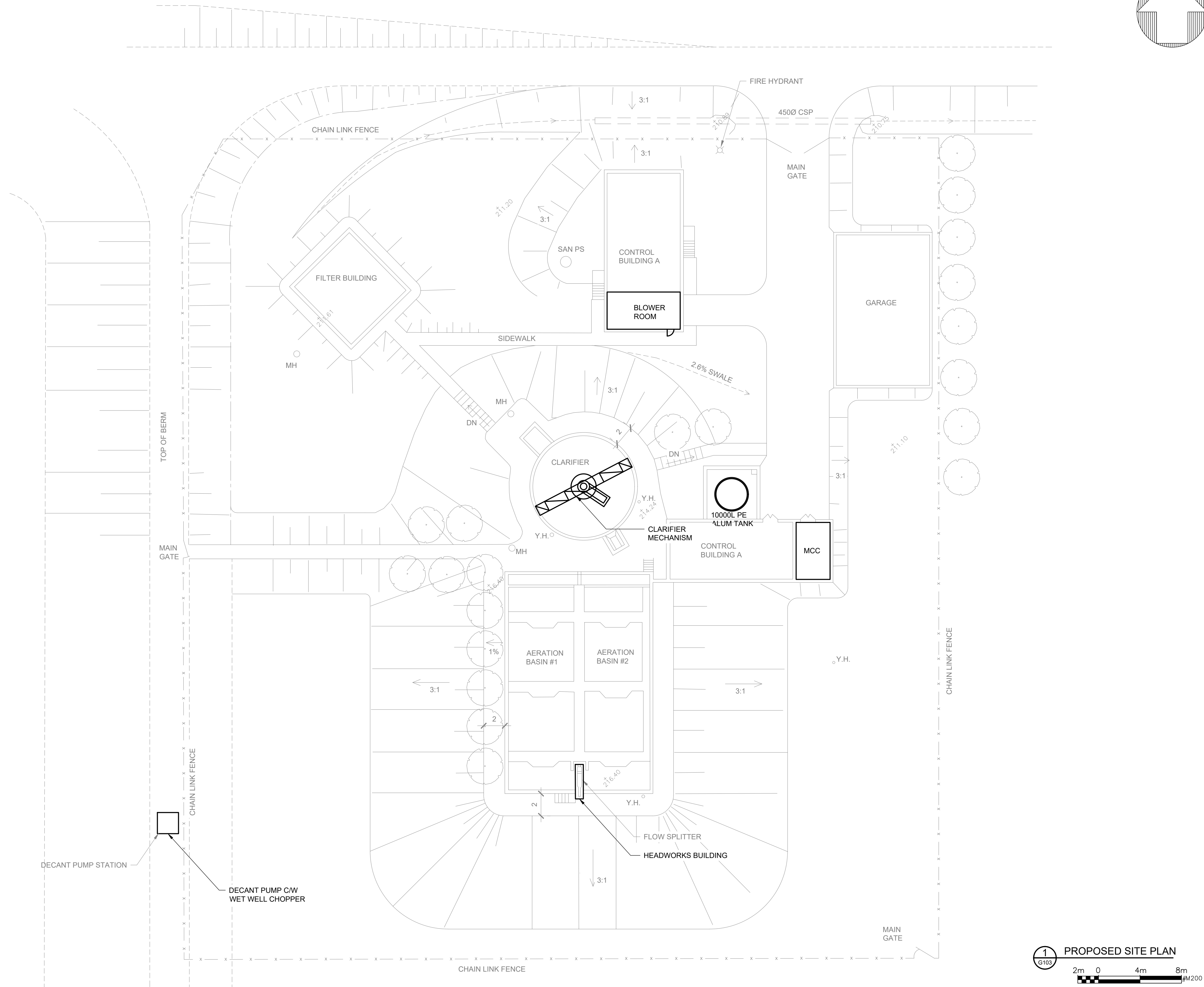


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GENERAL

EXISTING YARD PIPING

Scale: AS SHOWN	RVA Project No: 215817	
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Checked by: DME	Approved by: AIM	



1  
G103

PROPOSED SITE PLAN

2m 0 4m 8m  
#W200

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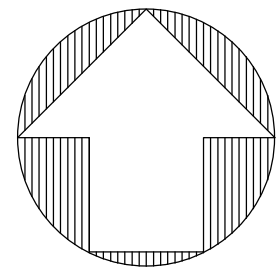
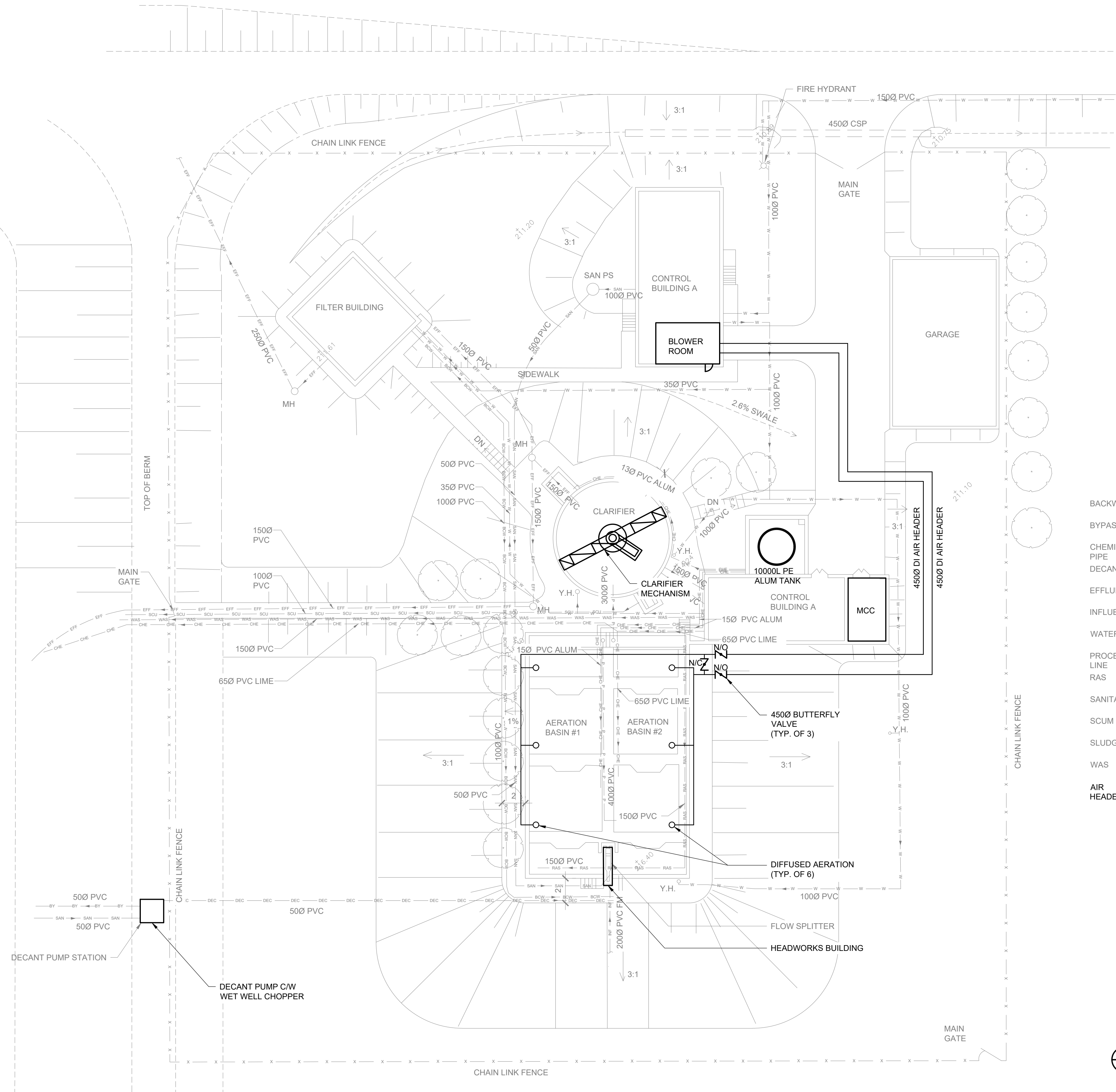
RODNEY WPCP UPGRADES

GENERAL

PROPOSED SITE PLAN

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Date: Apr-22			215817	
Drawn by: DG/OK	Designed by: MEH		DWG NO.	
Checked by: DME	Approved by: AIM		G103	





LEGENDS

BACKWASH	BCW
BYPASS	BY
CHEMICAL PIPE	CHE
DECANT	DEC
EFFLUENT	EFF
INFLUENT	INF
WATER	W
PROCESS LINE	P
RAS	RAS
SANITARY	SAN
SCUM	SCU
SLUDGE	SLU
WAS	WAS
AIR HEADER	

1 PROPOSED YARD PIPING



- NOTES:
1. PIPING LOCATION IS APPROXIMATE, CONTRACTOR TO CONFIRM LOCATION IN FIELD.
  2. CONTRACTOR TO DIVERT CLARIFIER FLOW TO LAGOON DURING INSTALLATION OF MECHANISM.

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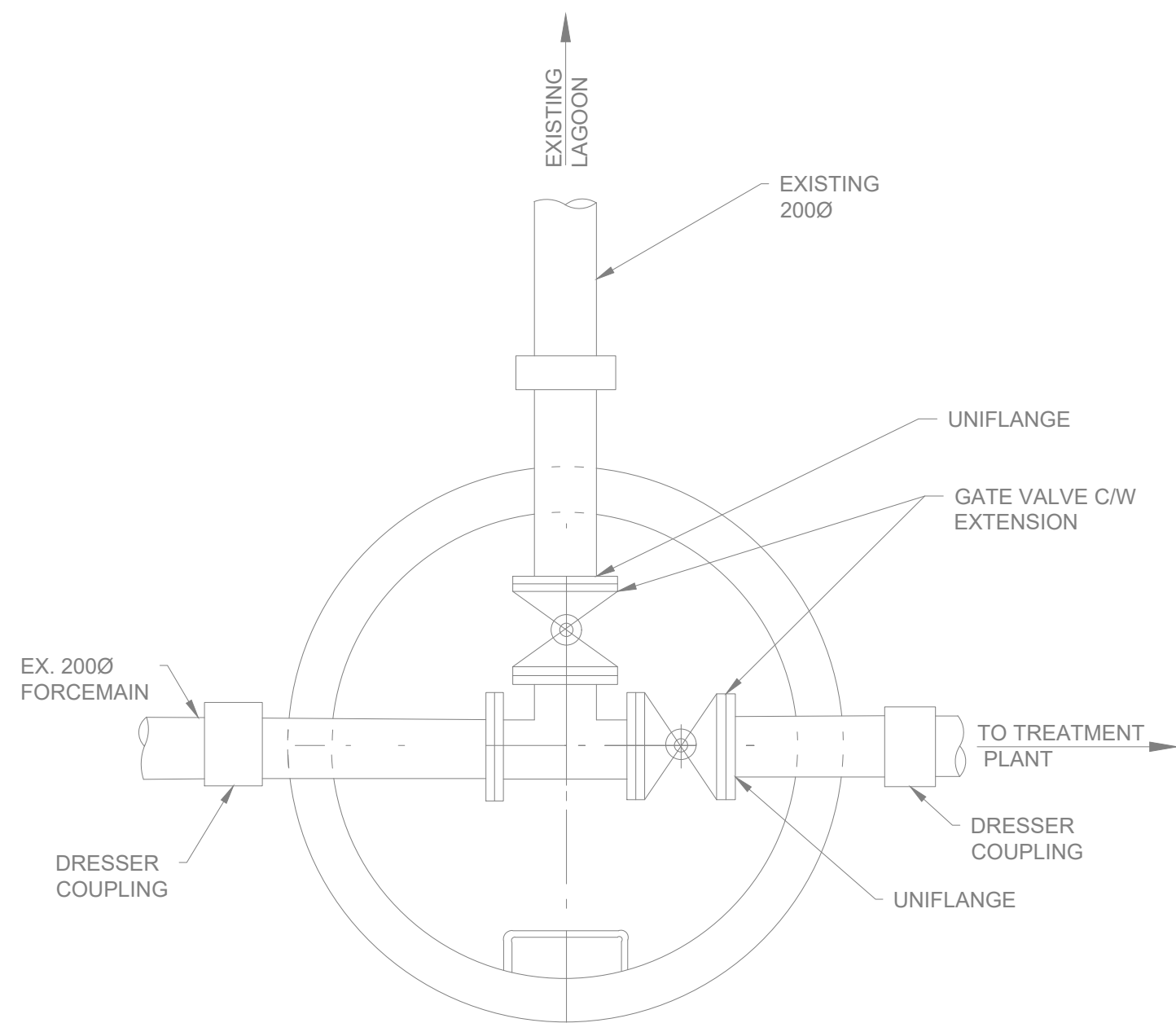
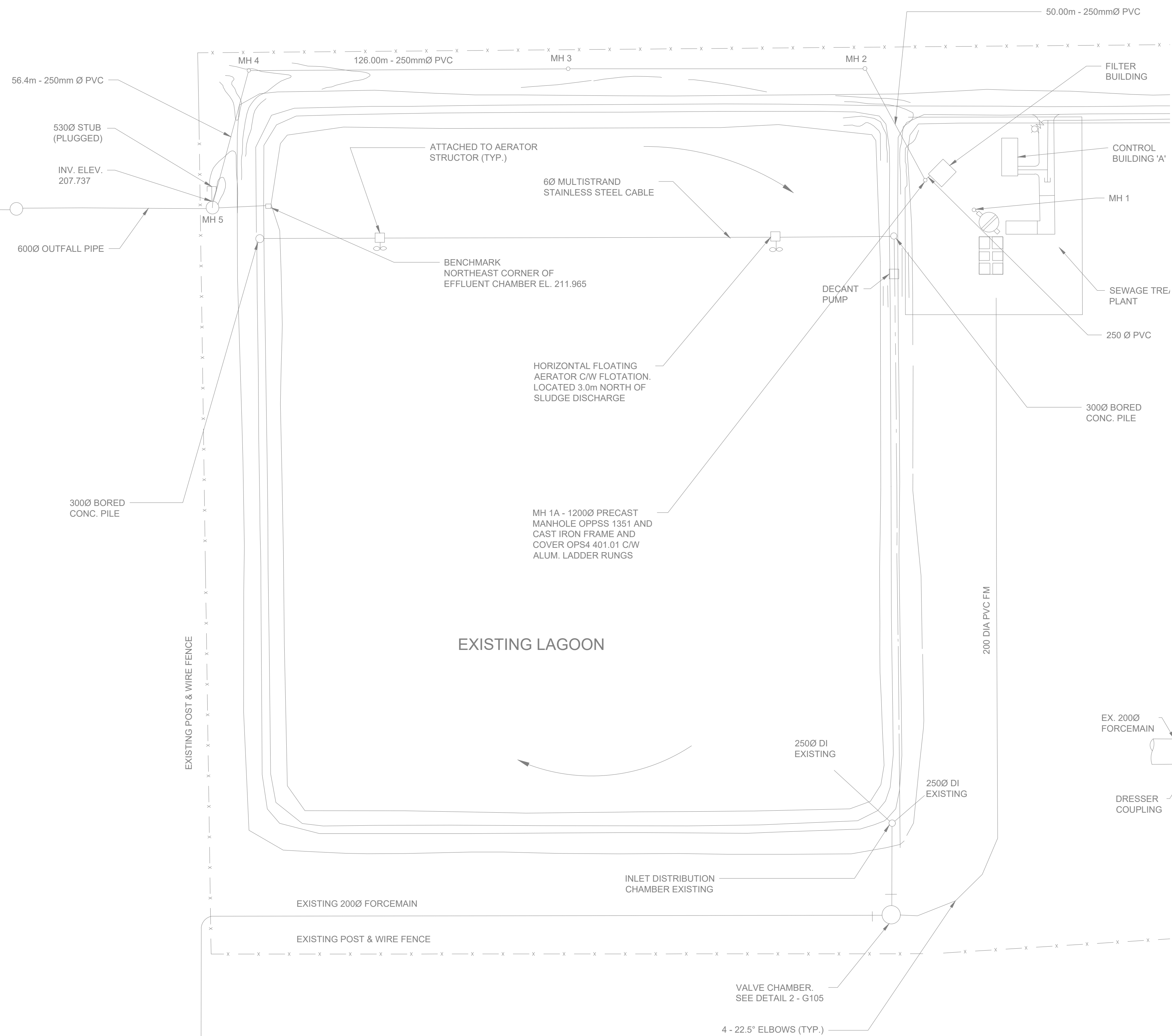
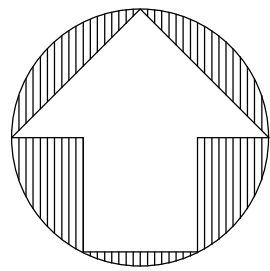


RODNEY WPCP UPGRADES

GENERAL

PROPOSED YARD PIPING

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Date: Apr-22		
Drawn by: DG/OK	Designed by: MEH	DWG NO. G104
Checked by: DME	Approved by: AIM	



**1** LAGOON PLAN

G105

10m 0 20m 40m

#M1000

**2** VALVE CHAMBER

G105

0.2m 0 0.4m 0.8m

#M20

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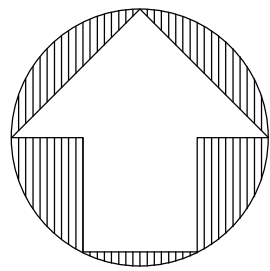
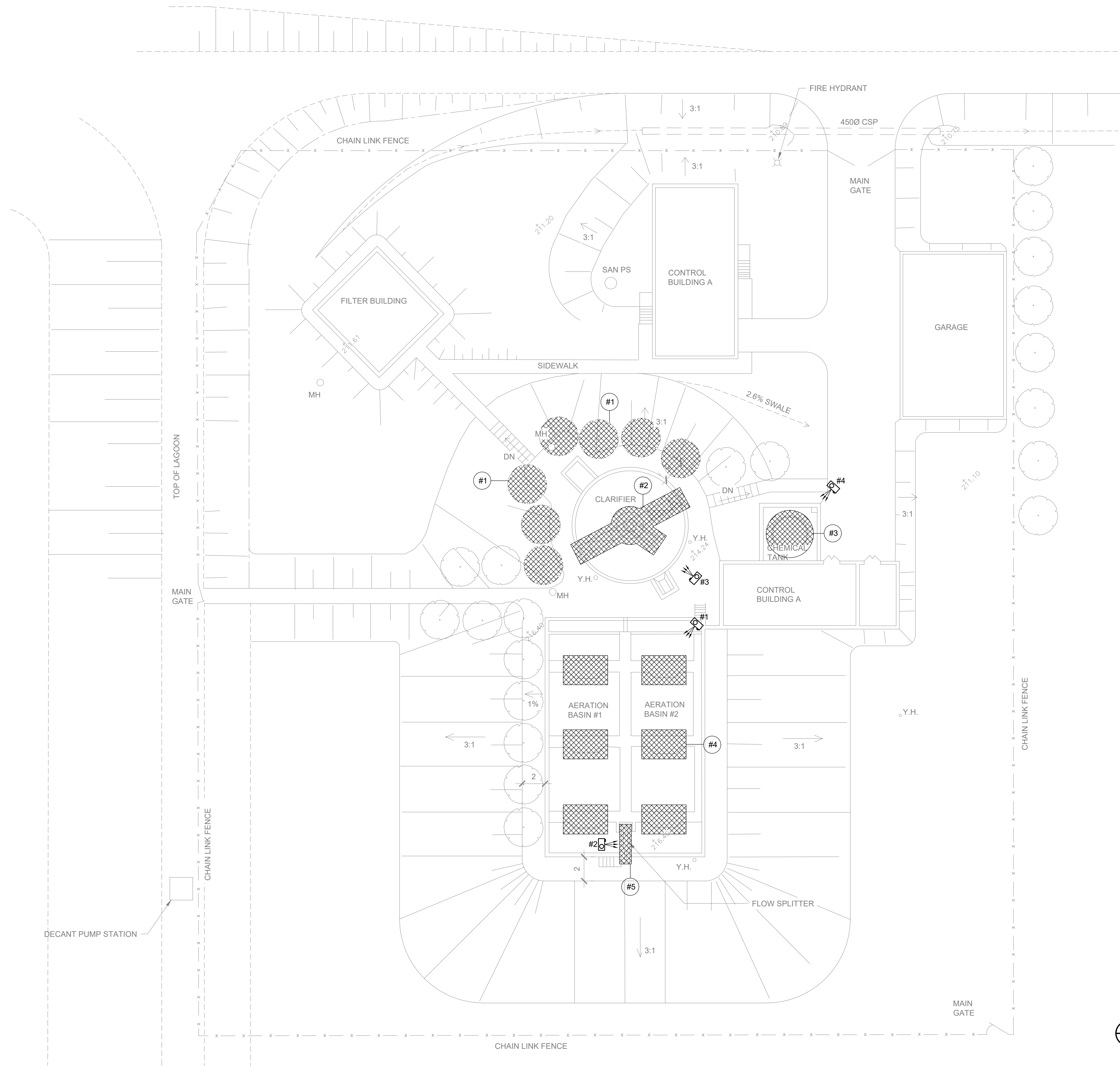
RODNEY WPCP UPGRADES

GENERAL

LAGOON PLAN

Scale: AS SHOWN		RVA Project No:	
Date: Apr-22		215817	
Drawn by: OK	Designed by: MEH	DWG NO.	
Checked by: DME	Approved by: AIM	G105	





1 REMOVALS SITE PLAN



- NOTES:
1. REMOVE AND DISPOSE OF TREES AROUND CLARIFIER. TREE REMOVALS TO BE COMPLETED OUTSIDE OF BIRDNESTING SEASON (APRIL 1 TO SEPTEMBER 15).
  2. REMOVE AND DISPOSE OF EXISTING CLARIFIER MECHANISMS AND FRP HOUSING ON CLARIFIER.
  3. REMOVE AND DISPOSE OF EXISTING 30000L ALUM TANK.
  4. REMOVE AND DISPOSE OF EXISTING SURFACE AERATORS (TYP. OF 6).
  5. REMOVE AND DISPOSE OF EXISTING SCREENING BUILDING.

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RODNEY WPCP UPGRADES

REMOVALS		SITE PLAN REMOVALS	
Scale: AS SHOWN		RVA Project No:	
Date: Apr-22		215817	
Drawn by: DG/OK	Designed by: MEH	DWG NO.	
Checked by: DME	Approved by: AIM	R101	





1  
R102

#1 - SURFACE AERATORS  
N.T.S



2  
R102

#2 - MECHANICAL BAR SCREEN  
N.T.S



3  
R101

#3 - CLARIFIER FRP HOUSING  
N.T.S



4  
R102

#4 - ALUM TANK  
N.T.S

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RODNEY WPCP UPGRADES

REMOVALS

REMOVALS

Scale: AS SHOWN		RVA Project No:  215817
Date: Apr-22		
Drawn by: DG/OK	Designed by: MEH	DWG NO.  R102
Checked by: DME	Approved by: AIM	



PIPING SYSTEMS

ACS	-	ACTIVATED SILICA
AI	-	INSTRUMENT AIR
AP	-	PROCESS AIR
BW	-	BACKWASH
CEN	-	CENTRATE
CW	-	COOLING WATER
DEWS	-	DEWATERED SLUDGE
DG	-	DIGESTER GAS
DRN	-	PROCESS DRAIN
DS	-	DIGESTED SLUDGE
DSU	-	DIGESTER SUPERNATANT
EW	-	EFFLUENT WATER
FE	-	FINAL EFFLUENT
FO	-	FUEL OIL
FW	-	FLUSHING WATER
GS	-	GRIT SLURRY
HW	-	HOT WATER
HPEW	-	HIGH PRESSURE EFFLUENT WATER
IWE	-	INLET WORKS EFFLUENT
ML	-	MIXED LIQUOR
NG	-	NATURAL GAS
OF	-	OVER FLOW
PE	-	PRIMARY EFFLUENT
PRW	-	PROCESS WATER
PS	-	PRIMARY SLUDGE
PW	-	POTABLE WATER
RAS	-	RETURN ACTIVATED SLUDGE
RS	-	RAW SEWAGE
SAND	-	SANITARY DRAIN
SC	-	SCUM
SE	-	SECONDARY EFFLUENT
STMD	-	STORM DRAIN
SU	-	SUPERNATANT
TFL	-	THICKENER FILTRATE
TWAS	-	THICKENED WASTE ACTIVATED SLUDGE
VNT	-	VENT
WAS	-	WASTE ACTIVATED SLUDGE
WS	-	WASTE SLUDGE
WW	-	WASTEWATER

CHEMICAL/ SPECIALTY PIPING SYSTEMS

ALUM	-	ALUMINUM SULFATE
APLY	-	APPLICATION POLYMER
CF	-	CHEMICAL FEED
CLD	-	CHLORINE DIOXIDE
CLG	-	CHLORINE GAS
CS	-	CHLORINE SOLUTION
CTS	-	CALCIUM THIOSULPHATE
FER	-	FERRIC SULPHATE
FLR	-	FLUORIDE
GAC	-	GRANULAR ACTIVATED CARBON
HYPO	-	SODIUM HYPOCHLORITE
NABS	-	SODIUM BISULPHITE
NAOH	-	SODIUM HYDROXIDE
NASI	-	SODIUM SILICATE
NH3	-	AMMONIA
NPLY	-	NEAT POLYMER
OZN	-	OZONE
PAC	-	POWDER ACTIVATED CARBON
PACL	-	POLYALUMINUM CHLORIDE

PIPE MATERIAL

BI	-	BLACK IRON
CI	-	CAST IRON
CPP	-	CONCRETE PRESSURE PIPE
CS	-	CARBON STEEL
CSP	-	CONCRETE SEWER PIPE
CU	-	COPPER
D.I.	-	DUCTILE IRON
DIGL	-	DUCTILE IRON GLASS LINED
FRP	-	FIBREGLAS REINFORCED PLASTIC
HDPE	-	HIGH DENSITY POLYETHYLENE
PET	-	POLYETHYLENE TUBING
PVC	-	POLYVINYL CHLORIDE
RC	-	REINFORCED CONCRETE
SS	-	STAINLESS STEEL

MISCELLANEOUS

B.F	-	BLIND FLANGE
CHK'D PL	-	CHECKERED PLATE
CH. OP.	-	CHAIN OPERATION
C.O.	-	CLEAN OUT
C.RED.	-	CONCENTRIC REDUCER
D.C	-	DRESSER COUPLING
DISCH.	-	DISCHARGE
E.RED.	-	ECCENTRIC REDUCER
F.C.	-	FLUSHING CONNECTION
F.D.	-	FLOOR DRAIN
F.F.D.	-	FUNNEL FLOOR DRAIN
H.C.	-	HOSE CONNECTION
H.V.	-	HOSE VALVE
HWL	-	HIGH WATER LEVEL
L.R.	-	LONG RADIUS
NOM.	-	NOMINAL (ELEVATION)
REF.	-	REFERENCE DIMENSIONS SUBJECT TO CHANGE PENDING EQUIPMENT SECTION.
S.C.	-	SAMPLING CONNECTION
SUCT.	-	SUCTION
V.C.	-	VICTAULIC COUPLING
V.F.	-	VICTAULIC FLANGE

VALVES

ARV	-	AIR RELEASE VALVE
BFP	-	BACKFLOW PREVENTER
BFV	-	BUTTERFLY VALVE
BLV	-	BALL VALVE
CV	-	CHECK VALVE
DV	-	DUCKBILL VALVE
GLV	-	GLOBE VALVE
GV	-	GATE VALVE
KGV	-	KNIFE GATE VALVE
MDV	-	MUD VALVE
MV	-	MOTORIZED VALVE
NDV	-	NEEDLE VALVE
PLV	-	PLUG VALVE
PNV	-	PINCH VALVE
PRV	-	PRESSURE RELIEF VALVE
SOV	-	SOLENOID VALVE
TLV	-	TELESCOPING VALVE
TWV	-	THREE WAY VALVE

VALVE OPERATORS

M	MOTORIZED OPERATOR
S	SOLENOID OPERATOR
P	PNEUMATIC OPERATOR

EQUIPMENT IDENTIFICATION (TAGS)

EXAMPLE : PMP-401  
                  |      |  
                 (1) (2)  
(1) REPRESENT EQUIPMENT NAME, I.E.: PMP  
(2) REPRESENTS EQUIPMENT NUMBER.

PIPING IDENTIFICATION (TAGS)

EXAMPLE: 100-WAS-SS  
                  |      |      |  
                 (1) (2) (3)  
(1) REPRESENTS PIPE SIZE IN MILLIMETERS  
(2) REPRESENTS SYSTEM  
(3) PIPE MATERIAL

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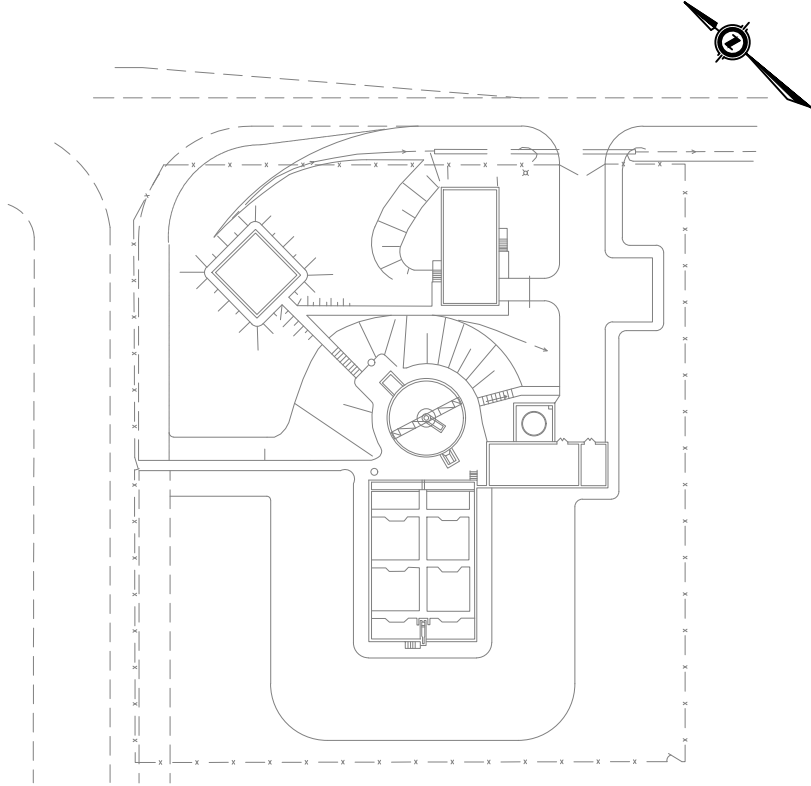
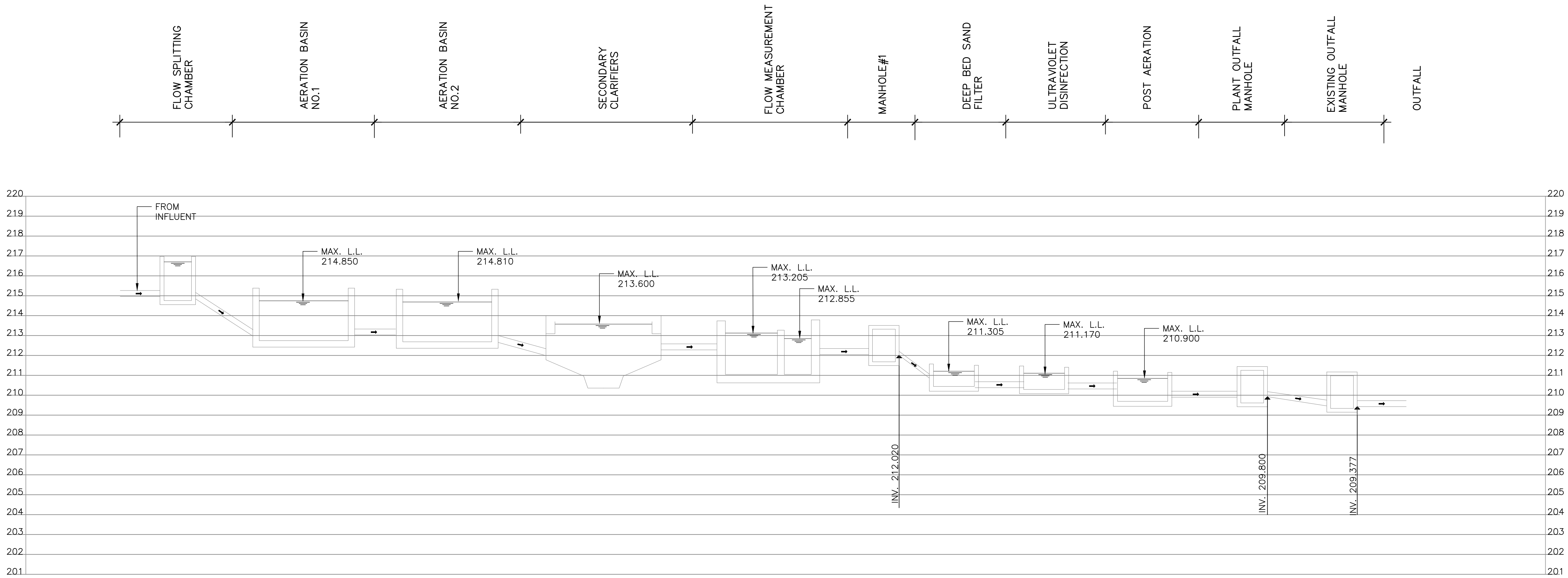


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PROCESS			
LEGENDS & ABBREVIATIONS			
Scale: AS SHOWN		RVA Project No:	
Date: Apr-22		215817	
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Schematics\Sheets\HYDRAULIC.dwg				
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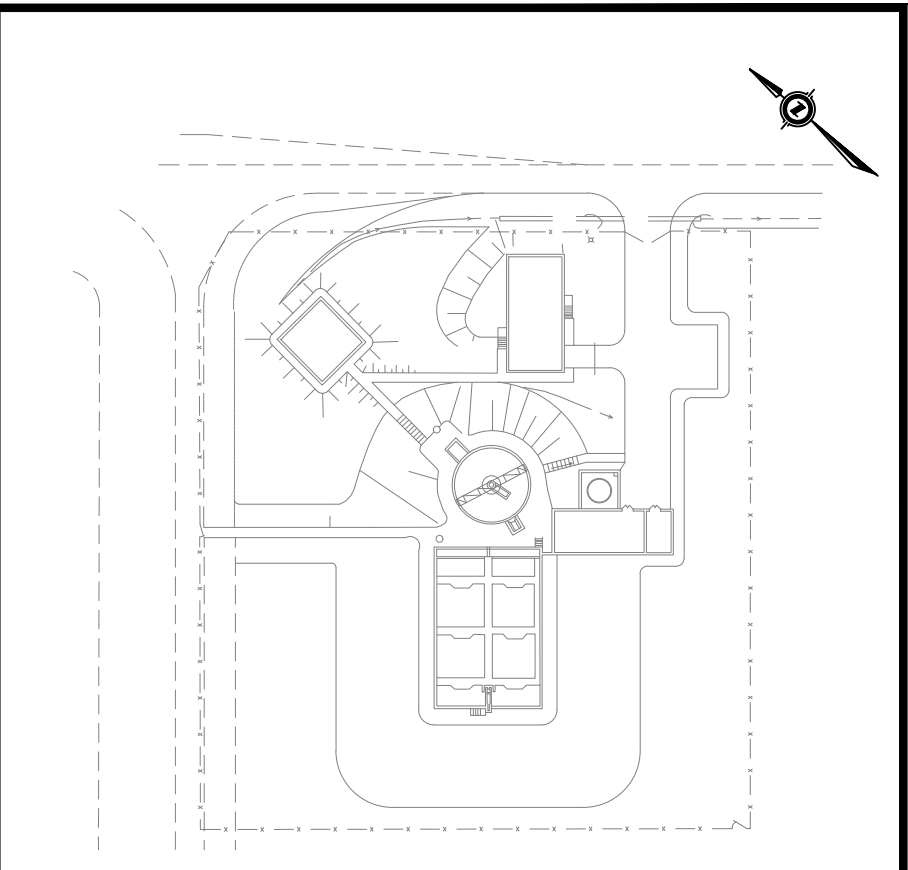
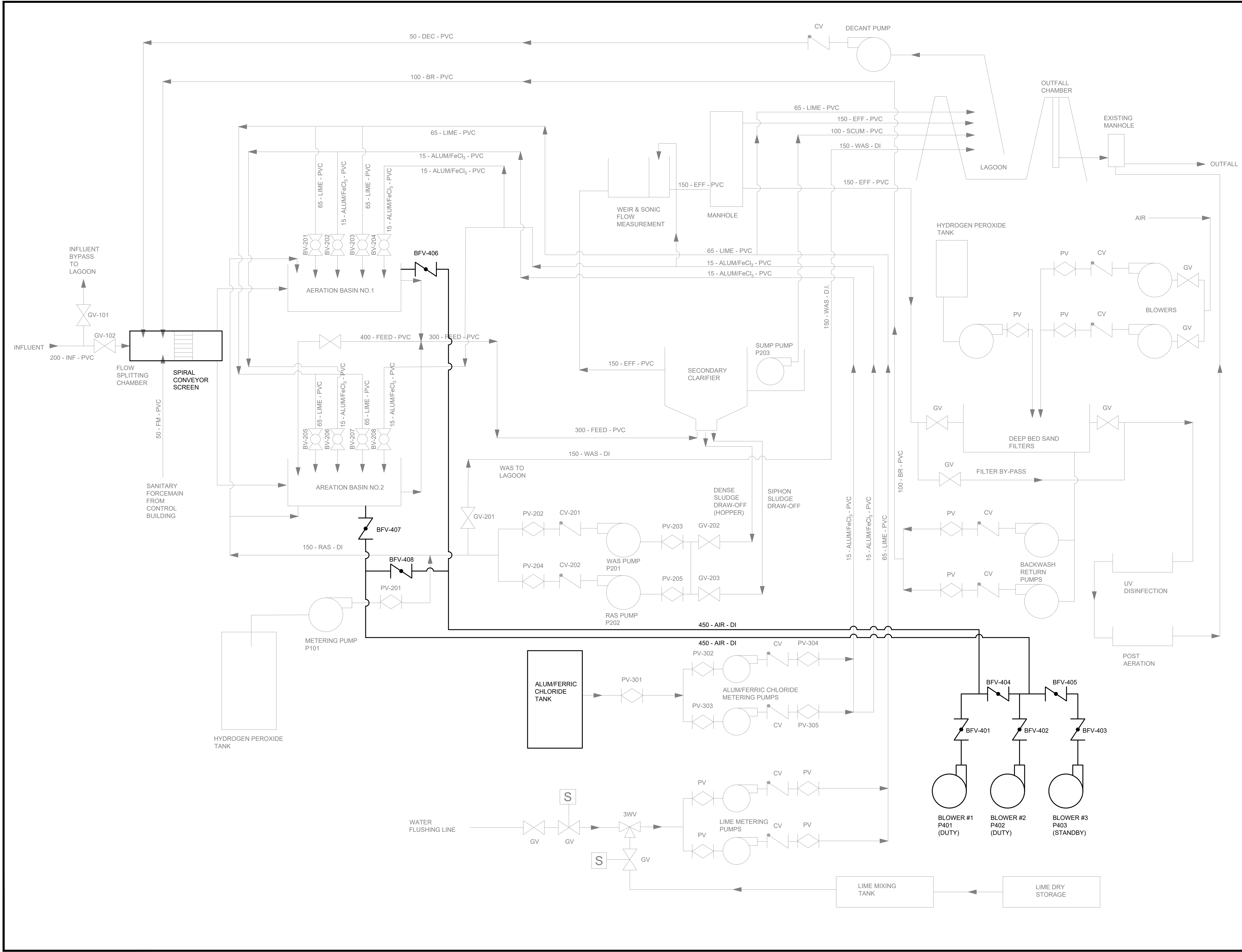
RODNEY WPCP UPGRADES

PROCESS

HYDRAULIC PROFILE

Scale: AS SHOWN		RVA Project No:  215817
Date: Apr-22		
Drawn by: DG	Designed by: MEH	DWG NO.  P004
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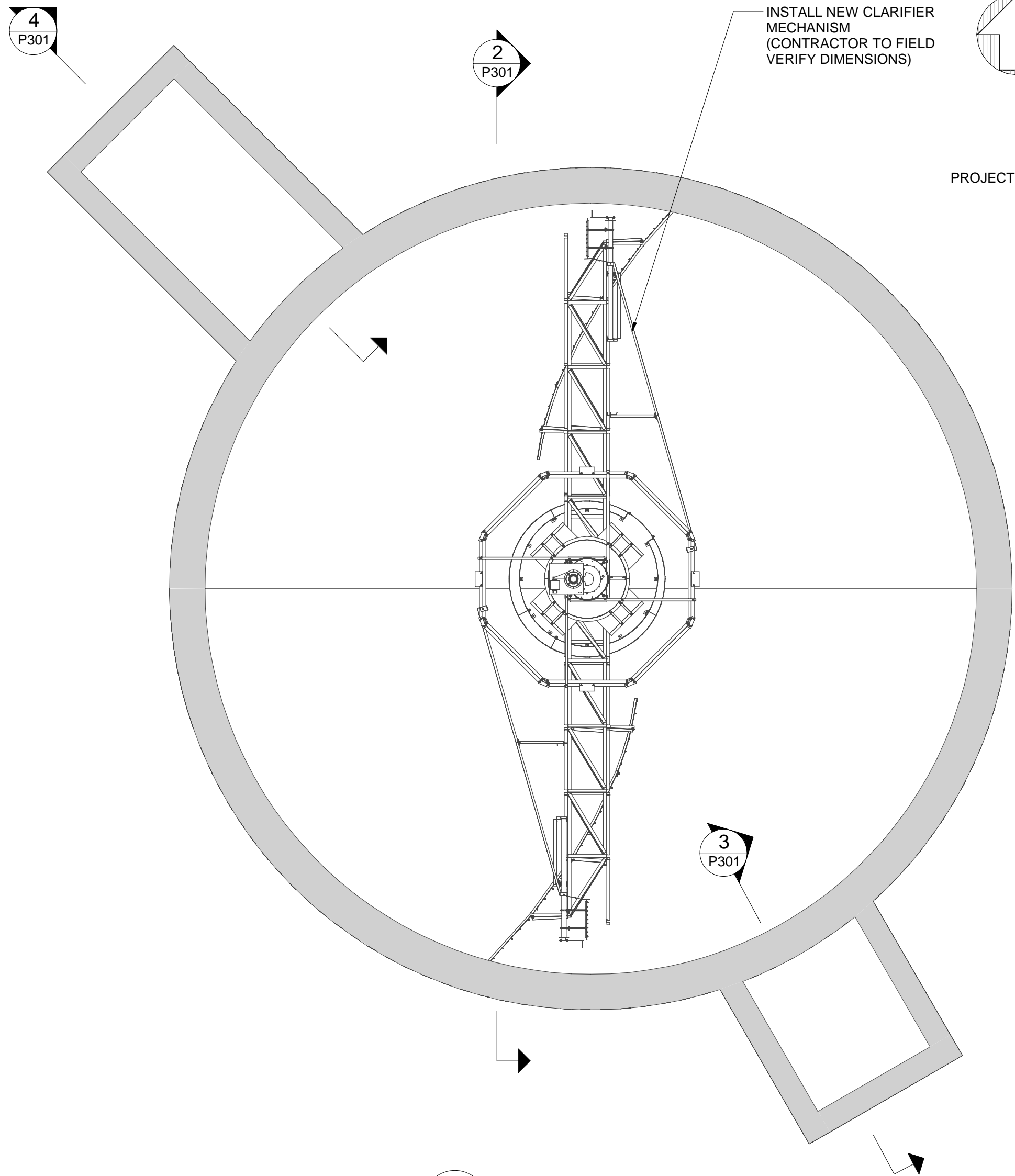


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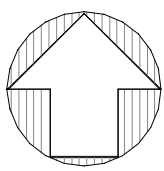
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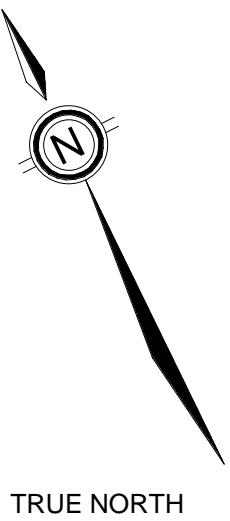
1 CLARIFIER  
P301

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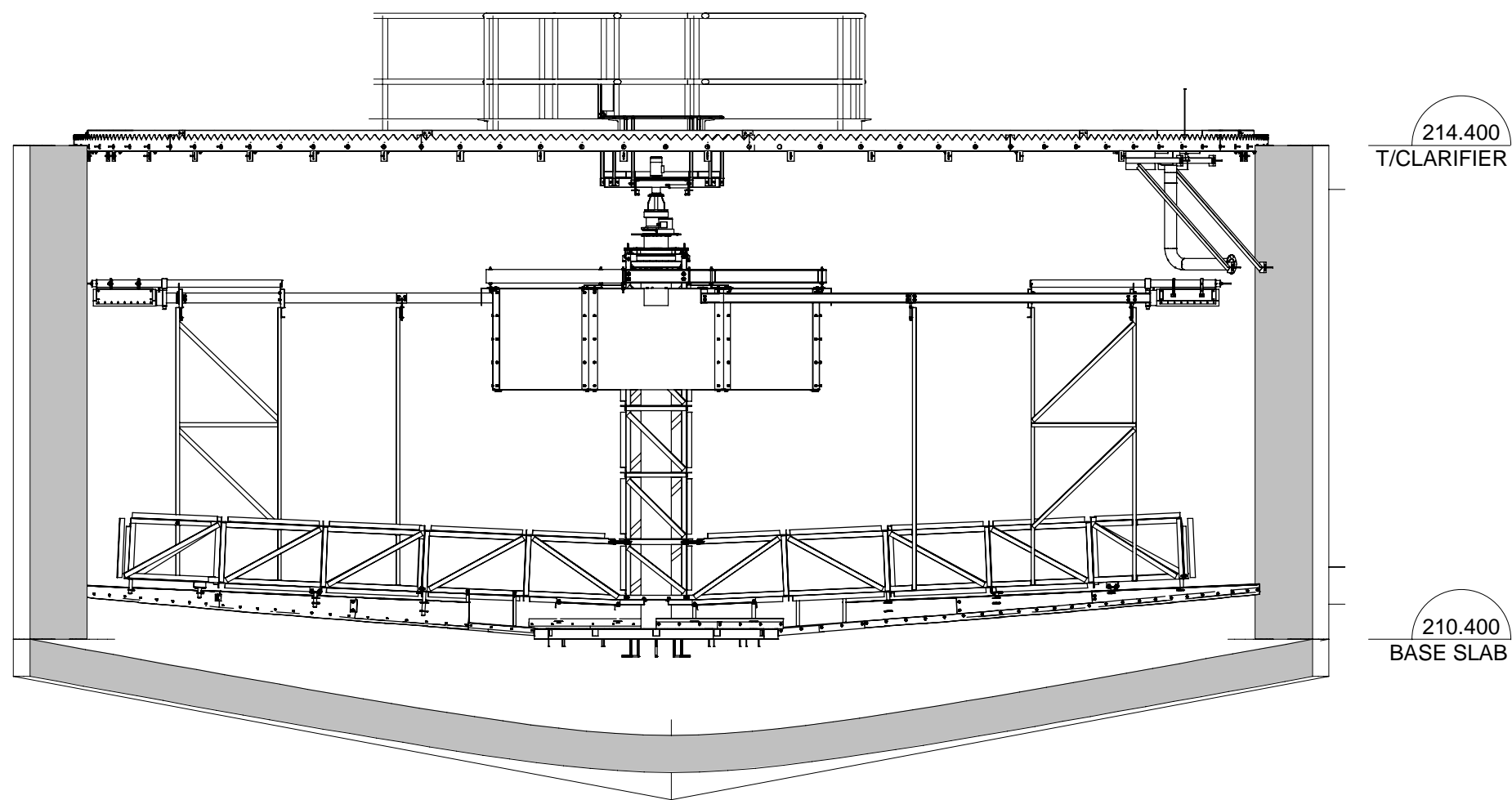
INSTALL NEW CLARIFIER MECHANISM (CONTRACTOR TO FIELD VERIFY DIMENSIONS)



PROJECT NORTH



TRUE NORTH

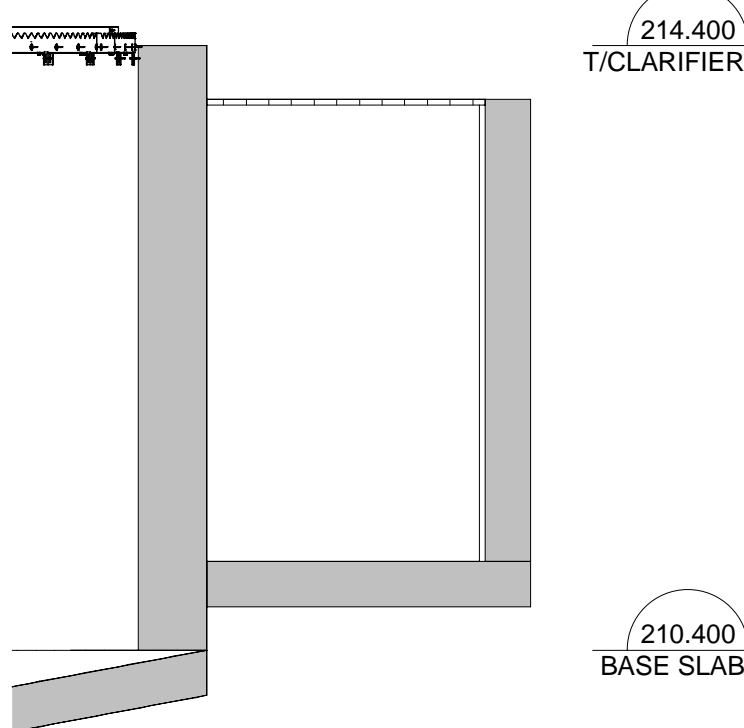


2 Section 1  
P301

0.5 0 1 2 m #M50

214.400  
T/CLARIFIER

210.400  
BASE SLAB

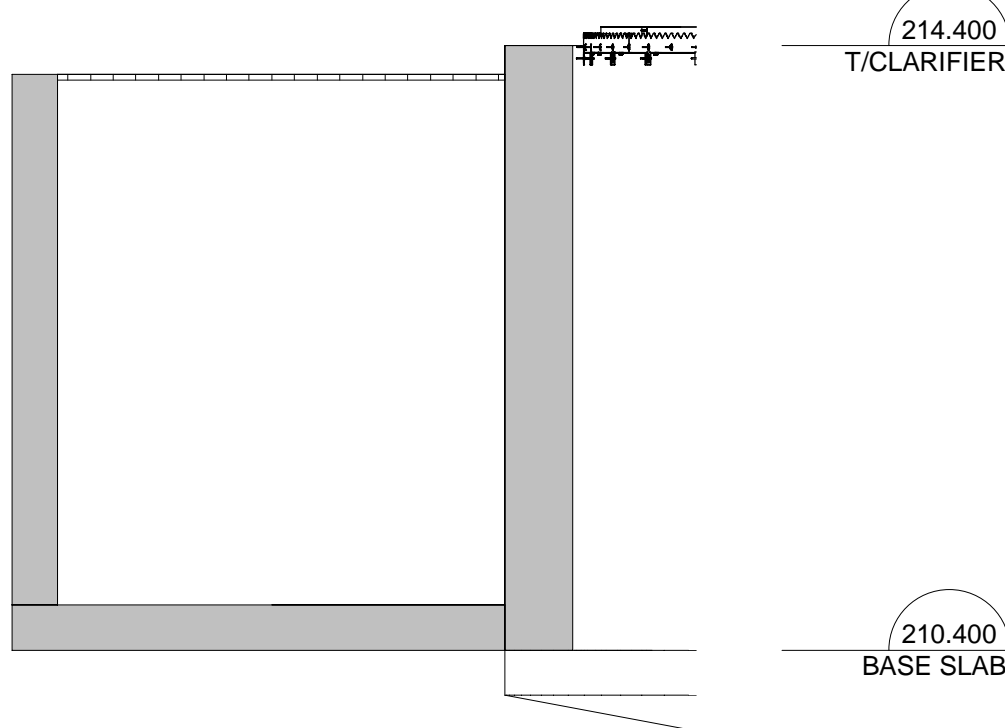


3 SCUM PIT  
P301

0.5 0 1 2 m #M50

214.400  
T/CLARIFIER

210.400  
BASE SLAB



4 FLOW MEASUREMENT CHAMBER  
P301

0.5 0 1 2 m #M50

214.400  
T/CLARIFIER

210.400  
BASE SLAB



MUNICIPALITY OF  
West Elgin

CONTRACT No. xxx



R.V. Anderson Associates Limited  
engineering • environment • infrastructure

THE MUNICIPALITY OF WEST ELGIN  
RODNEY WPCP UPGRADES

PROCESS  
SECONDARY CLARIFIER  
PLAN & SECTION

Scale: AS SHOWN		RVA Project No:
Date: MAY 2022		215817
Drawn by: DG	Designed by: Designer	DWG NO.
Checked by: Checker	Approved by: Approver	P301