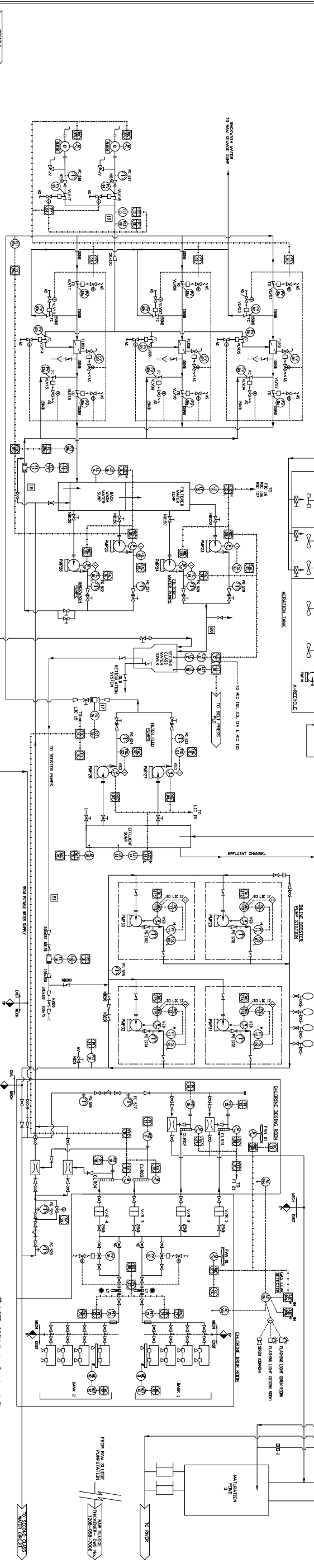
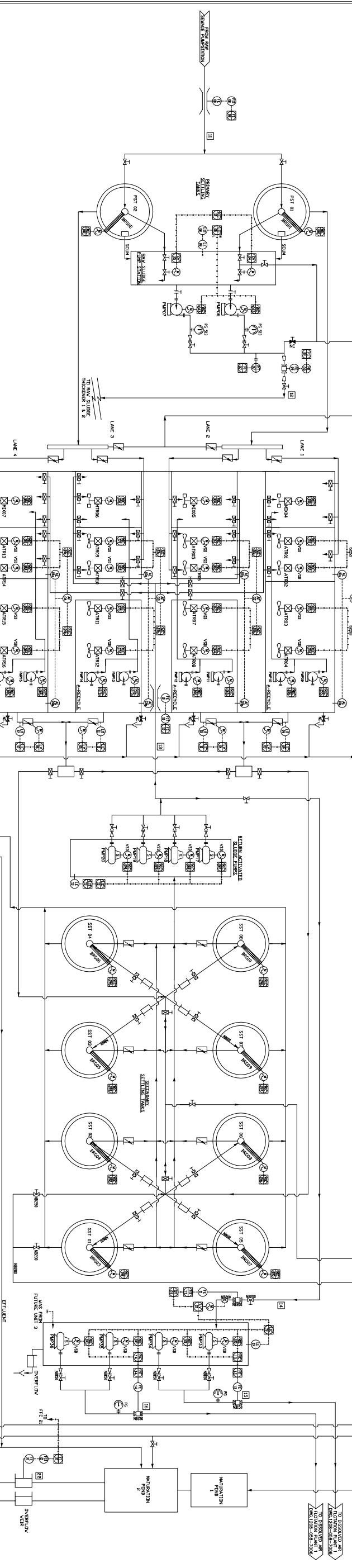
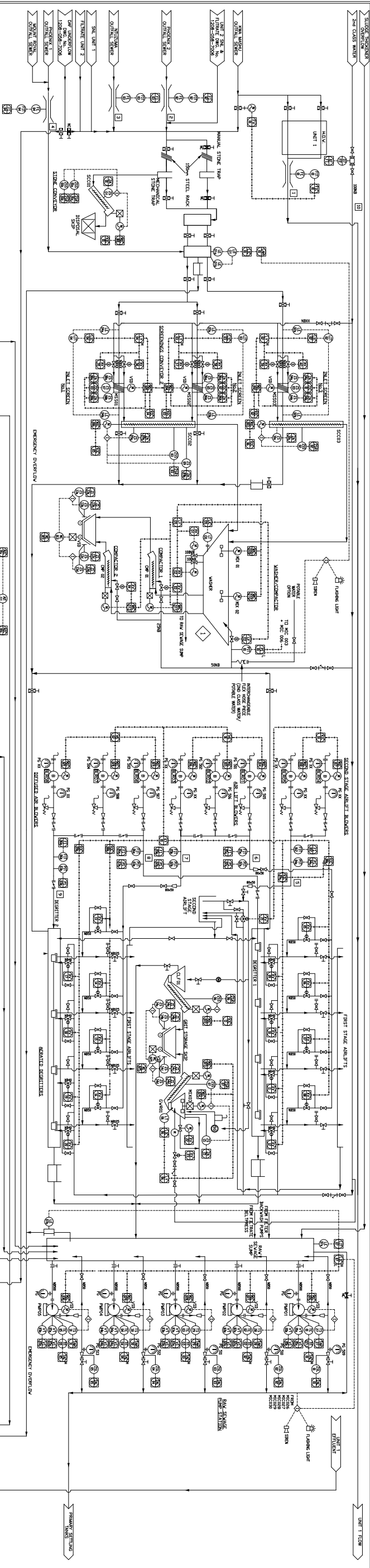



STREAM No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
DESCRIPTION	Unit 1 Inflow	Phoenix 2 Inflow	Nizumino Inflow	Phoenix 1 & Mount Royal Inflow	Second Stage Airlift	Airfit Blower 1	Airfit Blower 2	Diffused Air Blower 1	Diffused Air Blower 2	Inlet Works Wash Water	Unit 2 Total Inflow	Unit 2 Row Sludge	Unit 2 Return Activated Sludge	Unit 2 Waste Activated Sludge	D&F 1 Waste Activated Sludge	D&F 2 Waste Activated Sludge	Filter Feed Water	Filter Backwash Water	Filter Backwash Air Flow	Filled Water Supply	Second Class Water Flow	Final Effluent Flow			
PRODUCT	Row Sewage	Row Sewage	Row Sewage	Row Sewage	Air	Air	Air	Air	Air	Screwed Degraded Sludge	Row Sludge	Return Activated Sludge	Waste Activated Sludge	D&F 1 Waste Activated Sludge	D&F 2 Waste Activated Sludge	Clarified Effluent	Filled Second Class Water	Air	Second Class Water	Second Class Water	Effluent				
MAX. FLOW	35	35	43	12	180	180	180	180	180	80	200	65	55	55	200	212	168	100	175	190					
DESIGN FLOW	20	20	20	7	160	160	160	160	160	65	200	65	55	55	160	212	168	100	175	190					
FLOW UNITS	M/day	M/day	M/day	m ³ /day	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr	m ³ /hr					
PRESSURE	Atmospheric	Atmospheric	Atmospheric	Atmospheric	0 - 80	0 - 80	0 - 80	0 - 80	0 - 80	0 - 1117	0 - 115	Atmospheric	Atmospheric	0 - 80	0 - 80	0 - 200	0 - 173	0 - 366	0 - 200	Atmospheric					
PIPE MATERIAL	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	M.S HDG	M.S HDG	M.S HDG	M.S HDG	M.S HDG	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel	Concrete Channel				
PIPE SIZE					R0NB	R0NB	R0NB	R0NB	R0NB	15NB	20NB	15NB	20NB	20NB	15NB	15NB	20NB	20NB	100NB	15NB					



PLANT/ITEM No.	MS001 - 03	SC002 - 03	MX01 - 02, CAP01 - 02	BLR01 - 08	CLF01	CM001	PAW01 - 05	PAW06 - 07	PAW17 - 20	PAW23 - 24	PAW25 - 26	PAW27 - 28	BLR09 - 10	PAW29 - 32
DESCRIPTION	Stone Conveyor	Inlet Screens	Screensing Conveyors	Screensing Washer 1	Air/Oil/Inflator Blowers	Grit Washer 1	Row Sawage Pumps	Unit 2 Row Sludge Pumps	Unit 2 Return Activated Sludge Pumps	Waste Activated Sludge Pumps	Filtered Water Supply Pumps	Backwash Pumps	Filter Feed Backwash Blowers	Unit 2 Class Water Bottle Feed Pumps
EQUIPMENT DETAILS	Huber Rotomat U320 H2500X 132606 Step Shortless Screen Conveyor	Huber - SSF H2500X 132606 Step Shortless Screen Conveyor	Huber U260 - R81 WASH-260 Robox Blowers	Robuscan - EL323P Grit Washing	Gril Conds. Roshing Sieve & Gril Washing Conssiler	Immerable Pumps - Horosol L12X-HS1+L127S-2BEK1+ MC180-23	German Rupp Seal Priming V4660 - 6	Immerable Pumps - Wilo EML - FA10.11E - 181FH17.1 - 4/8K	Centrifugal Pumps KSB - ETA 100-315	Centrifugal Pumps KSB - ETA 125-200	Centrifugal Pumps KSB - ETA 125-200	Centrifugal Pumps KSB - ETA 125-200	Centrifugal Pumps KSB - ETA 125-200	Centrifugal Pumps KSB - ETA 125-200
Q/RY	1 m ³ /hr Max. Inflow 1500 l/s	4 m ³ /hr	Max. Screensing Volume: 12 m ³ /hr	140 m ³ /hr @ 50 JPa	200 m ³ /hr	2208 m ³ /hr @ 1530 Total Capacity	55 m ³ /hr @ 8m	100 m ³ /hr @ 32.5m	212 m ³ /hr @ 8m	160 m ³ /hr @ 16.3m	180 m ³ /hr @ 20m ³	Total Capacity 465533.33 l/hr		

NOTE: 220V Heater Supply not Shown

DEPARTMENT OF WASTEWATER MANAGEMENT



ETHIOPIAN MUNICIPALITY

LIQUID TREATMENT PROCESS & INSTRUMENTATION DIAGRAM – UNIT 2

ETHIOPIAN WATER & SANITATION

Contract No. **WS 6037**

Project Title

**KYA, MSU WWTW
SLUDGE TREATMENT CAPACITY UPGRADE :
ELECTRO – MECHANICAL WORKS**

Contract No. **WS 6037**

Project Title

**KYA, MSU WWTW
SLUDGE TREATMENT CAPACITY UPGRADE :
ELECTRO – MECHANICAL WORKS**

Drawing Title

**LIQUID TREATMENT
PROCESS & INSTRUMENTATION
DIAGRAM – UNIT 2**

Drawing Title

**LIQUID TREATMENT
PROCESS & INSTRUMENTATION
DIAGRAM – UNIT 2**

Drawn : **T.B./K.W.** Date : **30/07/09**

Designed: **C.N.** Date : **30/07/09**

Works Project Engineer : **K. BRACKENBURY**

Manager (Design) : **D. LARKIN**

Deputy Head, Technical Services:

Drawn : **T.B./K.W.** Date : **30/07/09**

Designed: **C.N.** Date : **30/07/09**

Works Project Engineer : **K. BRACKENBURY**

Manager (Design) : **D. LARKIN**

Deputy Head, Technical Services:

Drawing No. **1208-058-7005**

Sheet **07**

Rev. **07**