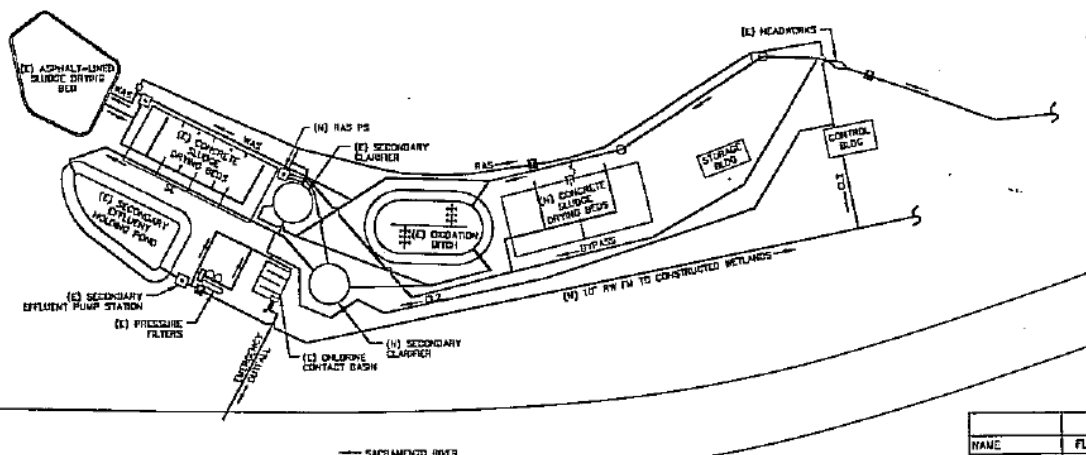


DESIGN CRITERIA

DESIGN CRITERIA	CURRENT 2012	DESIGN
ADWF (MGD)	0.13	0.27
MAF (MGD)	0.37	0.8
UDF (MGD)	0.72	1.0
PWWF (MGD)	0.77	1.0
PWWF : ADWF	5.9	3.7
Q RAS (MGD)	~0.11	0.14-0.43
INF BOD ADWF (MG/L)	130	150
INF SS ADWF (MG/L)	177	180
INF BOD ADWF (LBS/DAY)	159	338
INF SS ADWF (LBS/DAY)	190	405
MAX EFF BOD (MG/L)	30	30
MAX EFF SS (MG/L)	30	30



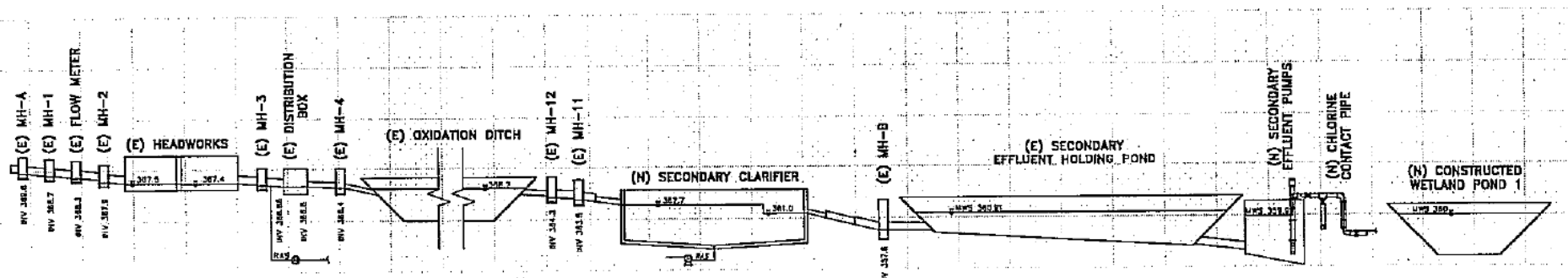
PROCESS DIAGRAM
NTS

LEGEND

- CL2 = CHLORINE SOLUTION
- E = EXISTING
- FU = FORCE MAIN
- M = FLOW METER
- N = NEW
- PS = PUMP STATION
- RAS = RETURN ACTIVATED SLUDGE
- RW = RECYCLED WATER
- SE = SECONDARY EFFLUENT
- WAS = WASTE ACTIVATED SLUDGE

PUMP STATION DATA

NAME	CAPACITY		SPEED CONTROL	
	FLOW (GPM)	TDM (FT)	FIXED OR VFD	HP
RAS	80-250	7-15	VFD	5
EFFLUENT	750	125	VFD	40



OXIDATION DITCH

EFFECTIVE VOLUME (CF)	33,680
MLSS (MG/L)	2,000
RAS (MG/L)	5,600
SV (UL/GH)	120
LOADING OVERALL (LBS BOD/1000 CF/DAY)	10.0
HYDRAULIC RETENTION TIME @ ADWF (HR)	2.2
WCT (DAYS)	13
TEMPERATURE SUMMER-WINTER (°C)	20-9
BRUSH AERATORS (NO.)	2
AERATOR MOTOR HORSEPOWER (HP)	25
OXYGEN TRANSFER CAPACITY (LBS O ₂ /HP/HR)	1.5
OXYGEN SUPPLIED W/ONE AERATOR IN SERVICE (LBS/DAY)	900

HYDRAULIC PROFILE

SCALE: HORIZ: NONE
VERT: 1" = 10'

CLARIFIER

DIAMETER (FT)	2-36
SIDE WATER DEPTH (FT)	8, 14
SURFACE AREA OF CLARIFIER (SF)	2,035
OVERFLOW RATE @ ADWF (GPD/SF)	133
OVERFLOW RATE @ PWWF (GPD/SF)	491
SOLIDS LOADING @ ADWF (LBS/SF/DAY) W/ DRAS	3.3
SOLIDS LOADING @ PWWF (LBS/SF/DAY) W/ DRAS	12
WEIR OVERFLOW RATE @ PWWF (GPD/LF)	4,423

SECONDARY EFFLUENT HOLDING POND

NUMBER	1
CAPACITY (GAL)	150,000
DETENTION PERIOD @ PWWF (HRS)	5.6

CHLORINE CONTACT PIPE

DIAMETER (IN)	10
LENGTH (FT)	12,500
VOLUME (GAL)	50,970
CONTACT TIME @ 750 GPM	05
PUMPING RATE (MIN)	05

HEAD WORKS

NUMBER OF COMMUNITORS	1
COMMINUTOR MAX CAPACITY (MGD)	5
NUMBER OF BYPASS TRASH RACK CHANNELS	1
CHANNEL WIDTH (FT)	2
MIN CLEARANCE BETWEEN BARS (IN)	1
PALMER-BOWLUS METER	1
MAX MEASURABLE FLOW (MGD)	2.5

NOTES:

- LOADING CRITERIA WITH (N) FACILITIES IN OPERATION AT ADWF UND.
- HYDRAULIC PROFILE BASED UPON DESIGN PWWF.

THIS IS ONE COPY OF ORIGINAL DRAWING
IF NOT ONE COPY BY THE SHEET, ADJUST SCALES ACCORDINGLY.

REVISIONS

NO.	DATE	REVISIONS

PACE
ENGINEERING
REDDING, CALIFORNIA

DESIGN: JH
CHECK: JH
DATE: 2/27/2013
JOB NO: 7115.02



RIO ALTO WATER DISTRICT
WASTEWATER TREATMENT PLANT & CONSTRUCTED WETLANDS PROJECT
HYDRAULIC PROFILE & PROCESS DIAGRAM

SHEET

C1

PG 1 OF 42

CONFORMED RECORD DRAWINGS