SCI WASTEWATER TREAMENT SYSTEMS

Specifications for SCI 6800 GPD

General

Supply and install (1) 6800 Gallon per day extended aeration wastewater treatment plant. The plant is designed to treat 6800 gallons of wastewater per day with an average 5 day B.O.D. of 200 PPM. The basic plant consists of aeration and final settling tanks constructed of precast reinforced concrete. The Plant package includes blower, motor, equipment housing, all necessary internal piping, valves and fittings, diffusers, baffles, transfer pipes, and adjustable V-notch effluent weir.

Aeration Tank

The plant shall be capable of treating 6800 gallons per day of domestic raw sewage waste with an average daily loading of 11.4 pounds of applied B.O.D. The aeration chamber has a design capacity of 915 cubic feet to provide for 24 hour detention of waste and at least 80 cubic feet capacity per pound of B.O.D. A minimum of 23.940 cubic feet of air per day is required in order to provide 2,100 cubic feet of air per pound of B.O.D. The treatment plant provides 40,698 cubic feet of air per day or 28.3 CFM at 2.8 PSI to meet this air requirement, as well as supply any air needed for air lift pumps.

Air headers and drops pipes are schedule 40 galvanized pipe with galvanized malleable iron fitting. Each diffuser drop pipe assembly has a control valve to permit adjustment of air flow and disconnection union for removal of the assembly for service.

Clarifier

The clarifier is constructed with hopper wall sloped 60 degrees to the horizontal with a bottom measuring one square foot in each hopper. The settling volume of 1167 gallons provides a minimum detention time of four hours. A surface settling rate of 199 gallons per day per square foot is provided. Inlet and outlet baffles are included to prevent short circuiting and keep floating solids from the effluent weir,

Settling sludge is returned to aeration by an air lift pump installed in the hopper. The air lift pump is capable of exceeding the plant's total daily flow and is controlled by an adjustable valve. An adjustable non-corrosive, V-notch effluent weir provides one liner foot of skimming surface for each 716 gallons of flow per day.

Equipment

Roots Connersville AF positive displacement rotary blower, or equivalent, is provided. The blower is powered by an electric motor and V-belt drive systems. The blower intake is equipped with an air filter/silencer and the discharge piping includes a pressure relief valve and flexible coupling.

Blower is powered by a 3 HP, 1 (phase), 60-cycle, 230 (volt), ball bearing, drip-proof electric motor. The motor is mounted on an adjustable base. Note: Unless otherwise specified motor shall be 230-volt, single-phase, 60-cycle.

The Air filter provides protection against foreign material.

A 24 hour time clock allows automatic cycling of the motor and blower.

An air lift surface slimmer with adjustable PVC intake fitting and adjustment/shut-off valve returns floating particles in final settling chamber back to aeration for further treatment.

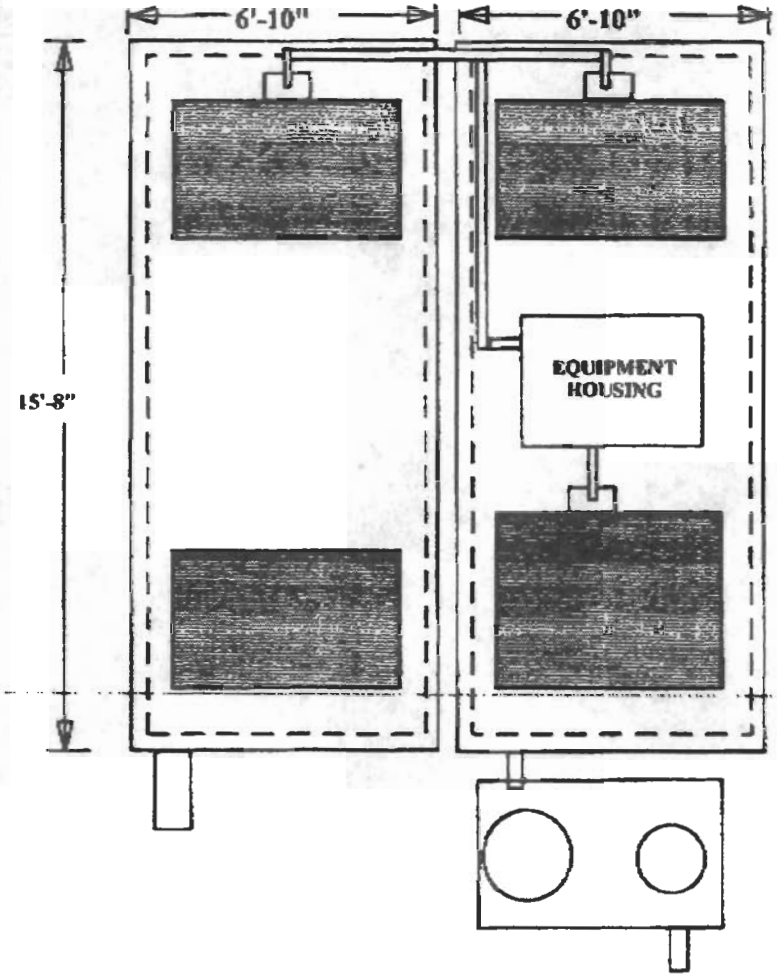
An air lift sludge pump with piping for routing the sludge to aeration tank shall be provided in each clarifier hopper. An adjustable shut off valve for air adjustment to vary the pumping rate shall be provided.

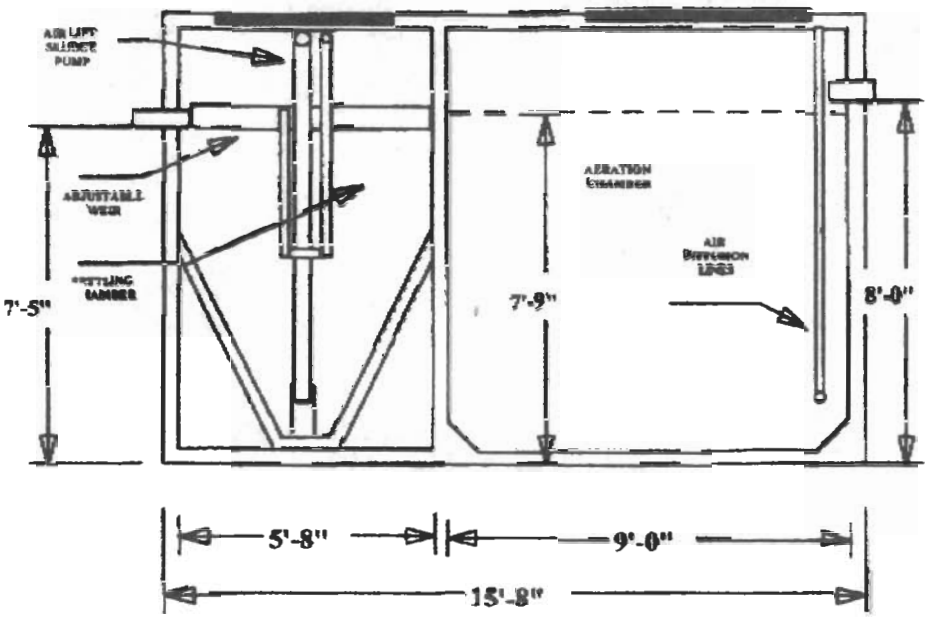
Complete grating covers all top openings.

A Tablet Chlorinator for dispensing solid chlorine tablets, is supplied with a precast concrete chlorine contact chamber, with internal baffles provides a minimum of thirty minutes detention

Limited 1 Year Warranty

All commercial plants parts supplied by SCI are warranted against defects under normal service of one year.





SCI 6800 GPD

SCI PRECAST 153 INDUSTRIAL DR. SLIDELL, LA. 70460
(985) 649-3782 1-800-696-6563

6800 GPD WASTERWATER TREATMENT PLANT
#4 REBAR 8" x 9" 7 BAG PER YARD MIX

WASTEWATER

SCI DUPLEX LIFT STATION

Specifications for SCI Duplex Lift Station

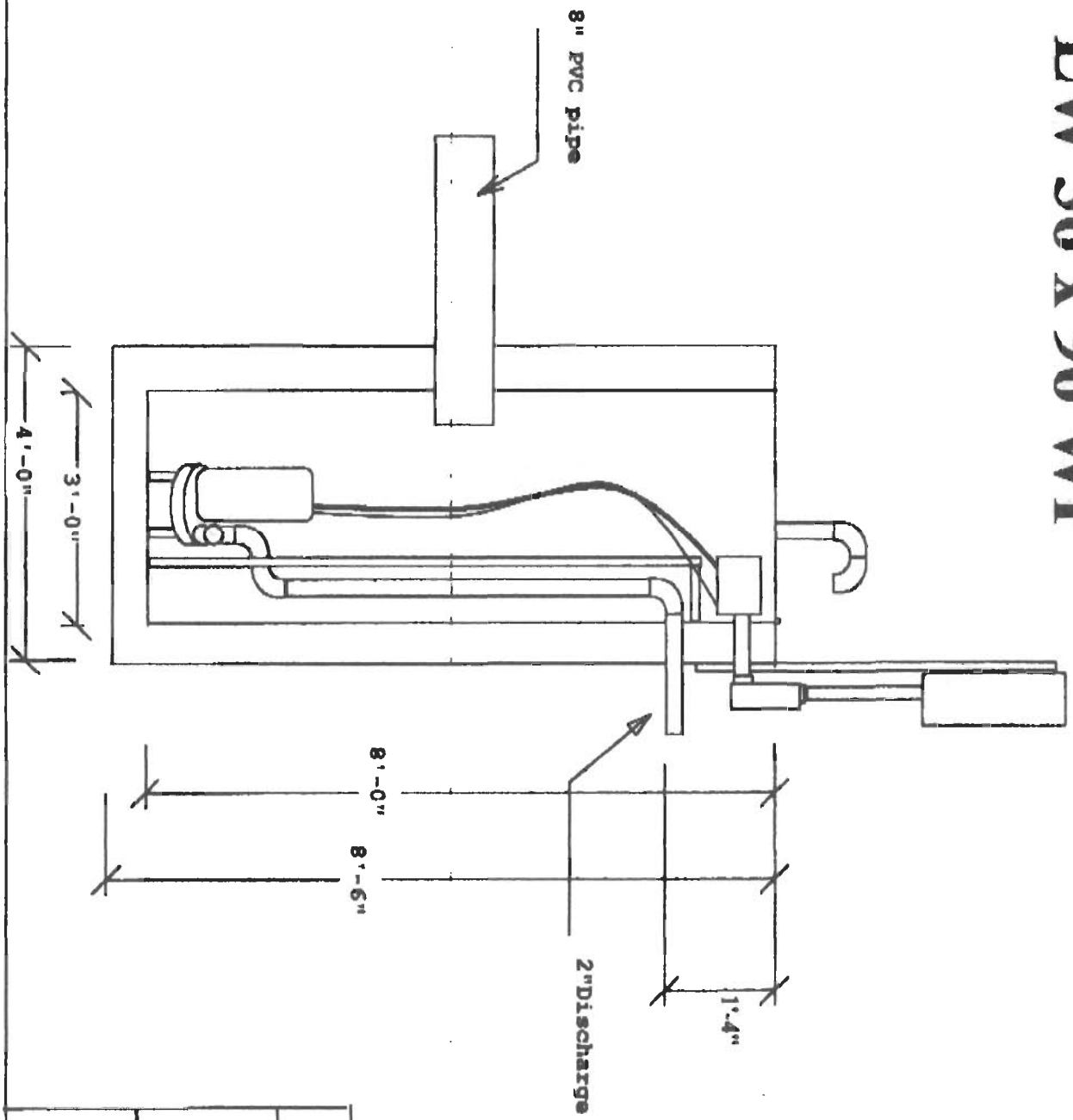
General
Supply and install (1) 3' x 3' x 12' Concrete lift well with aluminum cover and duplex grinder pumps.

Equipment
(2) 2 HP Zoeller, 1/60/240 VAC grinder pumps; (1) fiberglass outdoor duplex auto-reverse control panel; (4) weighted float switches with 15' long cords; (1) stainless steel cable holder; and (2) guide rail component sets. Minimum of 25 GPM @ 10' TDH.

Lift Well
(1) 36" x 36" x 8' deep concrete castings. Concrete is 7 bag per yard cement with #4 reinforcement bars. The joints are sealed with concrete sealant.

Limited 1 Year Warranty
Manufacturer warrants new product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for a period of one year.

LW 36 x 96 WP



SCI PRECAST

153 Industrial Dr.
Slidell,La.70460
(985)649-3782
1-800-696-6563

3'x 3'x 8'Lift Well
2 hp. Zoeller Pumps
7 Bag Per Yard Mix

☐WATER SYSTEM ☐SEWAGE SYSTEM ☐WATER & SEWAGE

DESIGN SUMMARY PACKAGE

(Fill Out Applicable Sheets)

Project:			
Engineer:			
Telephone:			
Parish:		Nearest Town:	
Population Served:			
New System ☐Yes ☐No		Existing System ☐Yes ☐No	
Project to be Owned and Operated By:			
Proposed Project Will Tie-in to:	Water:		
	Sewer:		

SEWER COLLECTION SYSTEM

Project:					
Engineer:					
General Scope of Project:					
GRAVITY PIPING	Material (specify ASTM standard and standard dimension ratio-SDR)				
	Size (8 inch minimum diameter)				
FORCE MAINS	Material (specify ASTM standard and standard dimension ration-SDR)				
	Size (3 inch minimum diameter without grinder pumps; 1 ¼ minimum diameter with grinder pumps)				
Joints and Materials of Fitting:					
LAYOUT	Slope of Gravity Mains	%Min.	%Max.	%Majority	
	Location with Respect to Water Lines:	Vertical Clearance (18 in min)			
		Horizontal Clearance (6 ft min)			
	Maximum Distance Between Manholes:				
	Other Comments: (Manhole Construction, Highway Crossing, etc.)				
Deflection Testing Yes ☐ No ☐		Hydrostatic Testing Yes ☐ No ☐			
Name of Certified Operator:					

WATER DISTRIBUTION SYSTEM

Project:			
Engineer:			
Reviewed By:			
General Scope of Project:			
Pipes	Material (specify ASTM standard, dimension ratio-DR, and pressure class):		AWWA/NSF Approved ☐Yes ☐No
	Size:		
Joints and Materials:			
LAYOUT	Valve Locations:		
	Dead Ends:		
	Location with Respect to Sewers:	Vertical Distance:	
		Horizontal Distance:	
	Hydrants (6" Lines or Larger) ☐Yes ☐No		
Normal Operating Pressure:			
Minimum System Pressure:			
Disinfection Method (include chlorine dosage and Retention time):			
SOURCE OF WATER	New Well ☐		Existing Well ☐
	Purchase From:		
Owned and Operated By:			
Name of Certified Operator:			
ADDITIONAL COMMENTS:			

LIFT STATION (S)

Project:			
Engineer:			
General Scope of Project:			
PUMPS	# per Station:	Submersible Grinders	
	Type:		
	Capacity:	GPM @ 20 TDH 15'	
		Hp 2	
	Pump Line Sizes and Type	Suction Line:	Submersible
		Discharge Line (3 inch min. diameter without grinder pumps; 1 ¼ inch min. diameter with grinder pumps):	2"
		Common Line:	2"
	Max. Solids Passage (in inches):		Grinder
	~~Gate Valve on Suction~~ ☐Yes ☐No		Gate Valve and Check Valves on Discharge ☑Yes ☐No
WET WELL	Detention/Design flow (in minutes – 30 min maximum):		
	Time for 1 Pump to Empty:		~~60 gal 3 min~~
	Volume (low water to lead pump on):	60 gal	
	Material:	Concrete	
	Diameter:	36 x 36 Sq.	
	Bottom Elevation:	12' below Grade	
	Invert of Influent:		
	Floor Slope:		
	Access Cover Diameter:	36 X 36	
	Vented and Screened ☑Yes ☐No		
FORCE MAIN	Size (3 inch min. diameter without grinder pumps; 1 ¼ inch diameter with grinder pumps):		2" PVC
	Material (specify ASTM standard and standard dimension ratio-SDR):		Sch 40 PVC
	Velocity (in fps – 2 fps minimum):		
Lift Station Cover Construction:		Aluminum	
Alarm Systems:	Visual: ☑Yes ☐No		Telemetric: ☐Yes ☑No
	Audio: ☑Yes ☐No		

EXTENDED AERATION SEWAGE TREATMENT FACILITY

1 of 3

Project:				
Engineer:				
General Scope of Project:				
Design Average Flow:	6800 GPD			
BOD_5 Loading (in lbs of BOD_5 per day):	11.4			
Max. # of Lots or Population at Maximum Capacity:	17			
Initial # of Lots (or population):				
Industrial Waste:	N/A			
Design Effluent Limits:	BOD_5 30	TSS 30	NH_3N	
Receiving Stream: (provide complete path from outfall to first navigatable waterway; a solid blue line on a USGS topographic map)				
Plant Manufacturer:	SCI Inc. Precast			
Plant Model #:	SCI 6800			
Materials of Construction:	Concrete			
AERATION TANK	Volume:	7000		
	Retention Time (24 Hour Min):	24.75		
	BOD_5 Loading (lb per 1000 CF, 12.5 min.):	12.5		
	Screen or Communutor ☐ Yes ☑ No			
FINAL CLARIFIER	Surface Area:	34.5		
	Surface Loading (gpdpsf @ peak hourly flow):	199 Gal.		
	Volume:	1167		
	Scum Baffle:	Yes		
	Skimmer Through:	Yes		
	Weir Loading (gpdplf @ peak hourly flow):	716 GPDPF		
Effluent discharge permit applied for from LADEQ?	☐ Yes ☐ No			
Name of certified operator:				

EXTENDED AERATION SEWAGE TREATMENT FACILITY

2 of 3

AIR SUPPLY	# of Blowers (2 min.):	1 Blower URAI 24
	Capacity of Each (SCFM):	28.3
SLUDGE RETURN	Method:	Air Lift Sludge Pump
	Maximum Flow (GPM):	9.44
	Maximum Percent (% of DAF):	100 %
N/A SLUDGE DRYING BEDS	Number of Beds:	
	Area of Each Bed:	
	Total Area:	
	Area per Capita:	
	Gravel Layer Depth:	
	Sizes:	
	Sand Depth:	
	Underdrain Size:	
	Freeboard Above Sand:	Splash Plate ☐ Yes ☐ No
	Effluent To:	
N/A SLUDGE LAGOONS	Number of Lagoons:	
	Maximum Depth:	
	Free Board:	
	Volume of Each Lagoon:	
	Volume of Each Lagoon per Capita:	
	Pump:	
	Piping Material:	Size:
	Effluent To:	
OTHER SLUDGE DISPOSAL METHODS Explain:		Periodic offsite waste disposal by licensed Contractor

EXTENDED AERATION SEWAGE TREATMENT FACILITY

3 of 3

CHLORINATION	Number:	1 double tube Lead	
	Gas or Hypo:	Tablet	
	Capacity (lb per 24 hrs):	6 lbs	
	Test Kit:		
	Location:	Plant effluent	
	Ventilation:		
CHLORINE CONTACT TANK	Inside Dimensions	Length:	5'-2"
		Width:	3'-3"
		Operating Depth:	30"
	Capacity (gal):	150	
	Retention Time (15 minute min. @ Peak Hourly Flow):	30 min	
	Baffles ☑Yes ☐No	Scum Baffle ☑Yes ☐No	
ADDITIONAL DETATILS	Backflow Prevention ☐Yes ☐No	Power Supply (Dual) ☐Yes ☐No	Washdown Facility ☐Yes ☐No
	Type:		
	Facility Fenced ☑Yes ☐No	Gates Locked ☑Yes ☐No	Access Road ☑Yes ☐No
ADDITIONAL COMMENTS:			