



Howard County Health Department

Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 04/04/2022

ONSITE SEWAGE DISPOSAL SYSTEM

P 571481

APPROVAL DATE: 07/31/2022

PERMIT:

Repair - Innovative &

Advanced

A

PROPERTY ADDRESS: 11703 Wayneridge Court, Fulton, MD 20759

SUBDIVISION: Moorefield

LOT: 5 BL C S2 TAX ID: 05-370175

CONTRACTOR: Legacy Septic

EMAIL: _____

CONTRACTOR ADDRESS: 2914 Hanover Pike, Manchester, MD 21102

PHONE: (410) 840-8766

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:

☒ MDE

☒ MANUFACTURER: BACKRIVER

PROPERTY OWNER: Yumoto, Futoshi; Yumoto, Reiko

EMAIL: _____

OWNER ADDRESS: 11703 Wayneridge Court

PHONE: _____

BAT UNIT MODEL: Norweco TNT 600

PUMP SIZE: WEO3L

PUMP TANK CAPACITY: 1500

OPERATION & MAINTENANCE AGREEMENT

DATE SIGNED: 03/16/2022

DATE RECORDED: 03/18/2022

DISTRIBUTION SYSTEM: ☐ GRAVITY

☒ PRESSURE DOSED

BEDROOMS: 4

APPLICATION RATE: _____

TRENCHES:

LINEAR FEET REQUIRED: 2 Zone Drip

INLET DEPTH: 6"

TRENCH WIDTH: _____

MAXIMUM BOTTOM DEPTH: 10"

MINIMUM SPACE

BETWEEN TRENCHES: _____

EFFECTIVE AREA BEGINNING DEPTH: _____

LOCATION: **TO BE STAKED BY SANITARIAN DURING PRE-CONSTRUCTION INSPECTION.**

NOTES:

Install system per approved plan submitted by Adam Browning, Penn Trail Environmental, 01/04/2022 KMW.

ISSUED BY: Joseph Cabahug 001997

ISSUE DATE: 06/23/2022

EXPIRATION DATE: 06/23/2023

NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING

NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADE FROM ANY WATER WELL

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

☒ ELECTRICAL PERMIT ISSUED E 22002055

NOTE: THE HCHD DOES NOT WARRANTY ANY SYSTEM AND CANNOT GUARANTEE THE PERFORMANCE OF THIS SYSTEM AS DESIGNED. BY ACCEPTING THIS PERMIT, THE OWNER AND/OR APPLICANT ACKNOWLEDGE THAT THE SPECIFICATIONS DETAILED IN THIS DESIGN ARE ONE POSSIBLE OPTION AND THAT THE HCHD WILL REVIEW OTHER PROPOSALS. YOU HAVE THE OPTION TO SEEK THE ADVICE OF A QUALIFIED DESIGN CONSULTANT OR PROFESSIONAL ENGINEER FOR FURTHER GUIDANCE.

NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

CALL 410-313-1771 TO SCHEDULE INSPECTIONS.

NOT TO SCALE

SEE ATTACHED

ROAD NAME

TRENCH/DRAIN/FIELD DATA

WIDTH INLET BOTTOM

NUMBER OF TRENCHES

TOTAL LENGTH

ABSORPTION AREA

DISTRIBUTION BOX LEVEL

DISTRIBUTION BOX BAFFLE

DISTRIBUTION BOX PORT

-DRIP FIELD-

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL YES

MANUFACTURER BACK RIVER

CAPACITY TOTAL 600 GAL

SEAM LOC TOP

TANK LID DEPTH 3'

BAFFLES BAT

BAFFLE FILTER BAT

MANHOLE LOC FRONT/MD/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED BAT

DATE ON LID 06/27/2022

PUMP/SEPTIC TANK LEVEL YES

MANUFACTURER BAYSTAR

CAPACITY 1500 GAL

SEAM LOC TOP

TANK LID DEPTH 3'

BAFFLES -

BAFFLE FILTER -

MANHOLE LOC FRONT/BACK

6" PORT LOC -

WATERTIGHT TEST -

SLOTTED -

DATE ON LID 04/28/2022 (LID)

05/09/2022

PRE-CONSTRUCTION:

07/06/2022 CONFIRMED PRECON SPECS. EXPOSED EX TANK PULLED/M

INSTALLATION: 07/07/2022 3.810(C) BAT TANK TO BE ON SOLID BED. CORRECTED
IN FIELD. REMOVED FILL - TO ROTATE PUMP TANK. 07/11/2022 INSTALLED

DRIP ZONES. 07/12/2022 INSTALLED 1/2 LINES TO DRIP ZONES; ABANDONED
AND SEALED EX SEPTIC TANK. 07/13/2022 INSTALLED CONTROL BOX 07/24/2022 FINAL.

FINAL INSPECTOR

[Signature]

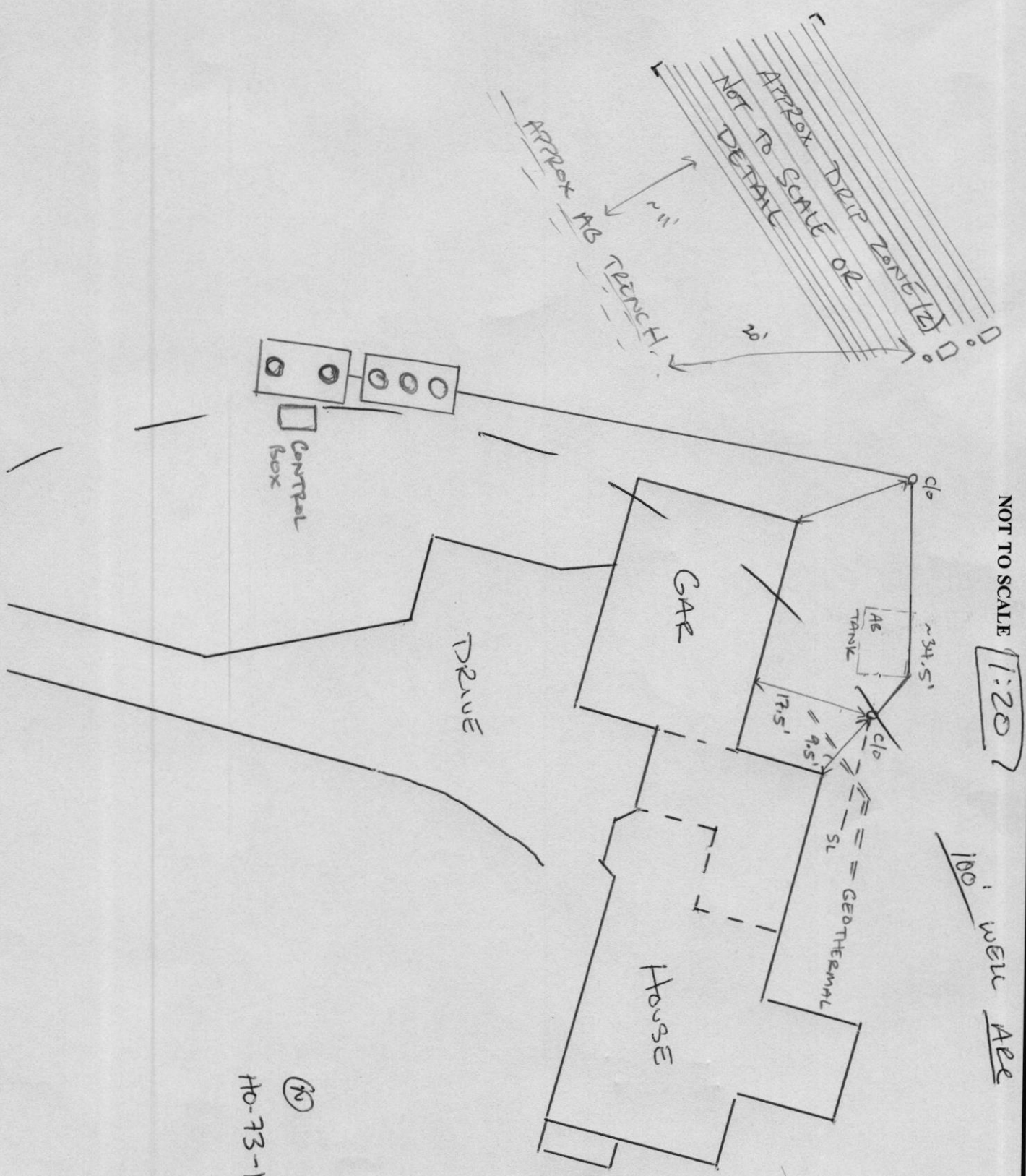
DATE OF APPROVAL

07/31/2022

WAYNERIDGE STREET

11703

WAYNERIDGE COURT



NOT TO SCALE

1:20

(N)
HO-73-1924



BACK RIVER PRE-CAST, LLC
PO BOX 329
GLYNDON, MD 21071
PH# 410-833-3394

NORWECO CERTIFICATION

PROPERTY OWNER: FUTOSHI YUMOTO	INSTALLATION COMPANY: LEGACY SEPTIC
ADDRESS: 11703 WAYNERIDGE CT.	CERTIFIED INSTALLER: GEORGE SCHOOLEY
CITY, ZIPCODE & COUNTY: FULTON, 20759, HOWARD	PERMIT#
SIZE OF SYSTEM INSTALLED:	DATE INSTALLED: 07-07-22
600 GPD CONCRETE	START-UP DATE: 07-26-22
NUMBER OF BEDROOMS:	DATE OF FINAL INSPECTION:
TYPE OF INSTALLATION: FAILING	DATE OF ELECTRICAL INSPECTION:
ELECTRICAL WIRING PER ELECTRICAL INSTRUCTIONS: YES	TANK LEVEL: YES
HT. OF CONTROL PANEL ABOVE FINAL GRADE: 48"	BURIAL DEPTH OF TANK: 30"
SYSTEM WIRED ON A 15-AMP DEDICATED CIRCUIT WITH STD. BREAKER: YES	RISERS 4" - 6" ABOVE GRADE: YES
LENGTH(S) OF UF WIRE PAST LAST AERATION RISER(S): 48"	VENTED LID(S) ON AERATION CHAMBER(S): YES
FEMALE PLUG(S) WIRED TO UF WIRE: YES	ANY GROUND SETTLING AROUND TANK: NO
CONDUIT(S) ENTERING AERATION RISER MADE WITH A WATERTIGHT CONNECTION: YES	
ISTHE INSIDE OF THE CONDUIT ENTERING THE CONTROL PANEL(S) AND AERATION RISER(S) SEALED WITH DUCT SEAL: YES	

ON 2ND PAGE MAKE A ROUGH SKETCH OF THE HOUSE ,WHERE THE SYSTEM IS LOCATED, WHERE THE CONTROL PANEL IS LOCATED , WHERE THE FRONT OF THE IS AND DIRECTIONS TO THE PROPERTY.

DIRECTIONS CAN START A FEW STREETS AWAY

EXAMPLE: RT. X LEFT ONTO XX STREET RIGHT ONTO PRIVATE DRIVEWAY 5TH HOUSE OF THE LEFT.

I certify that the Norweco Singlair TNT Wastewater Treatment System was installed according to the manufacture's specifications.

Matthew Geckle

July 26,2022

Signature of BRP Representative

Vice-President

Date

Bay Area Environmental
4213 Madonna Rd
Jarrettsville, MD 20184
410-836-9206

DRIP DISPOSAL FLOW VERIFICATION

To: Howard County Health Dept
Maryland Department of Environment

July 31, 2022

Re: 11703 Wayneridge Crt. – Fulton

Installer: Legacy Septic

On 7-26-22 a field verification/startup was performed for the drip dispersal system installed at 11703 Wayneridge Crt. It is assumed that the contractor has passed all inspections by the local Health Department, MDE and other required approving authorities during installation. It should be noted that the installation of the system was not monitored and therefore, the bulk of the responsibility for the proper installation of the system must fall on the installer. Jones Pump Service did not see the piping configuration prior to backfill. American Manufacturing has recommended that Bay Area/Jones Pump Service does not certify the tubing connections, because we can not verify tubing and fitting manufacturer. Tubing was not provided by Jones Pump Service/Bay Area.

Bay Area Environmental/Jones Pump Service will warrant through the manufacturer any components purchased from our company. Components that were not purchased as part of a Perc Rite package can not be warranted. Warranties can not be honored that are caused to fail because of failure of components not purchased as part of the Perc Rite drip disposal package as quoted and outlined as part of the package price. Installer has agreed to accept liability of components not purchased as part of the drip disposal package. There are certain repairs that will need to be completed for the warranty of hydraulic components purchased not to be voided in full, see below.

- 1 – Wiring for floats will need to be corrected from J-box to control panel
Wiring will need to be a minimum size of 16AWG or thicker
- 2 – 1.5 inch brass swing check valve added in dose chamber for the pump

Bay Area Environmental
4213 Madonna Rd
Jarrettsville, MD 20184
410-836-9206

Flow verification date 7-26-2022

Dose rate: Zone 1 = 1.95gpm Zone 2 = 2.85gpm

Gallons per dose: Zone 1 = 18.86gpd Zone 2 = 30.10gpd

Dose run time: Zone 1 = 9min Zone 2 = 9min 10sec

Standard rest time = 1.5hrs

Peak rest time = 54min

Flush rate: Zone 1 = 8.30gpm Zone 2 = 12gpm

Final meter reading = 3,318.80 gallons

Peak flow = 600gpd Average flow = 360~~0~~gpd

Dwayne C Jones

Bay Area Environmental

Septic Design & Component Report

Prepared for

11703 Wayneridge Court

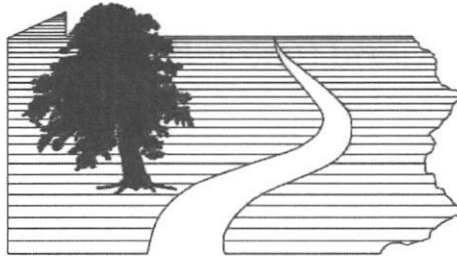
Account #05-370175

Situate in

5th Election District, Fulton

Howard Co., MD

Prepared by



Penn's Trail Environmental, LLC

327 E. Ridgeville Blvd. - #141

Mount Airy, MD 21771

Phone: (301) 829-5022

Fax: (215) 362-4620

www.pennstrail.com

October 19, 2021

PTE#5290

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System Component #2 – Absorption Area Dose Tank & Pump

System Component #3 – Central Hydraulic Control Unit (CU)

Design Adequacy Review Letter

Manufacturer Owner’s Manual



GENERAL PROJECT STATEMENT

The property is located at 11703 Wayneridge Court, 5th Election District, Howard County, Maryland. The subject tract can be more specifically identified as Parcel Identification Number 05-370175

A peak daily sewage flow of 600 gallons per day (GPD) was applied to the four bedroom dwelling per the standard identified in COMAR.

Note: "System Component Identification Number (I.D.) below corresponds to numbers as found on the design plan set(s) and Appendices of this report.

SYSTEM COMPONENT I.D. #1 - PRIMARY TREATMENT

Primary treatment will be through an approved Class I Best Available Treatment (BAT) unit. All chamber openings and/or vents shall be extended to grade. For pumping schedule please contact manufacturer or speak with a representative of the permitting agency. Additional maintenance is to be performed per the manufacturer's recommendations. Special attention should be paid to installation of plastic tankage. See manufacturer's installation instructions.

SYSTEM COMPONENT I.D. #2 - ABSORPTION AREA DOSE TANK AND PUMP

The drip field is dosed from a single compartment pump tank with a single phase Submersible Pump. A detailed specification sheet is attached. Maintenance will include inspection of the tank connections for watertight integrity, inspection of the pump floats to function and free movement along the operational path, and activating the alarm via the in-tank float. These procedures should occur at least twice per year.

SYSTEM COMPONENT I.D. #3 – CENTRAL HYDRAULIC CONTROL UNIT

The Hydraulic Control Unit provides the final filtration through the use of in-line disk filters that must have a filtration efficiency of 115 microns or smaller and requires little routine maintenance. Filters must have an automatic backwash system that is utilized prior to every dose. Each disposal zone is to be forward flushed a minimum of every 50 cycles at a scouring velocity of 2 feet per second. Unit must be fitted with a flow meter for proper monitoring of the system. Maintenance is to be performed per the manufacturer's recommendations. At minimum the unit vault should be checked for inundation, insect or animal damage and overall integrity.

ALARMS & CONTROL PANELS

Alarms and controls panels are specified from standard product lines and are included in the drip irrigation kit sold by the manufacturer and/or a distributor of the specified materials. Once initial startup is confirmed each system should be checked quarterly by the operator (alarms and monitor) and bi-annually during the full inspections. Any failure noted shall be immediately remedied.



OPERATION OF SYSTEM

The system has been designed to operate daily all months of the year with minimal user intervention. In the event an alarm sounds or is seen, it is recommended the owner contact the installer and/or manufacturer for inspection, service and if needed repair.

OPERATION & MAINTENANCE NOTES

By this reference the Letter of Agreement for Monitoring, manufacture's owner's manual and requirements, local permitting agency's permit conditions and general regulation. In the cases of dispute in frequency or necessity of operational procedures, the most restrictive recommendation shall apply.

COPYRIGHT & INFRINGEMENT STATEMENT

This maintenance and operation manual and attached plans are proprietary and copyright© 2021 by Penn's Trail Environmental, LLC. The format style and content has been developed solely for the use of the client and/or property owner of the tract specifically identified herein. Duplication, re-use, or generation of reports substantially similar in content, language and format is expressly forbidden. Any other copy or transmission will be considered a violation of copyright protection and subject to recovery of damages as permitted by state and federal statutes.

MATERIAL SUBSTITUTIONS

The materials specified are based on manufacturer's publications and specifications contained herein or by reference. By recognition of continually evolving materials and methods, local availability, costs, as well as contractor experience, substitution is permitted of equivalent and similar materials for the following components: tanks and aerobic treatment units (ATU-must be approved by manufacturer of drip package), hydraulic control unit, drip tubing and electrical devices and float systems.

Pumps have been specifically calculated based on existing and proposed components to operate within an acceptable range of performance without developing diminished or excessive system pressures, thus better assuring long-term components and economical performance. Pumps are not to be substituted without suppliers and manufacture's approval.



SIGNATURES

The following signature is required to ensure that the applicant involved understands the system components as well as the necessary maintenance of the system outlined in this manual to properly ensure that the drip irrigation system installed remains working at peak efficiency.

Applicant

Date

A representative of the manufacturer must meet with the homeowner within 1 month of system start-up and/or occupancy of the dwelling.



Soil Reporting Forms & Data



FILE INQUIRY NOTES

11703 WAYNERIDGE

DATE	RESULTS OF REVIEW FOR FILE
02/21/2021	TEST PIT A 16' DEEP; SHELF AT 6' WAS REFUSED FOR INFILTRATION RATE. RESHELF AT 7'. WATER SEEP @ 10.5' DISQUALIFYING SOIL TREATMENT ZONE @ 7'.
	PERC B WAS DUG AT GRADE RESULTING WITH 10 MIN RATE. UPPER SOIL WAS REDESCRIBED IN DETAIL TO SUPPORT A SHALLOWER SYSTEM.
	SDA IS CONFINED TO FRONT LEFT COR OF YARD DUE TO 100' WELL AREA. 
05/10/2021	MET WITH STEVE KREIC, MDE TO LOCATE SUITABLE AREA. AUGER SAMPLES TAKEN FROM UPPER COR. OF LOT BY TREES, PROP LINE, WAYNERIDGE ST (PHOTO OF APPROX. AREA.

AP 568843

(A)

14"
22"
84"
48"
109"
126"
192"

RE can
SCL
SBK w/ MF
RED SCL w/ MF
24 mti w/ P
YEL RED
SCL w/ P
H₂O REP
5% R₂

(A)

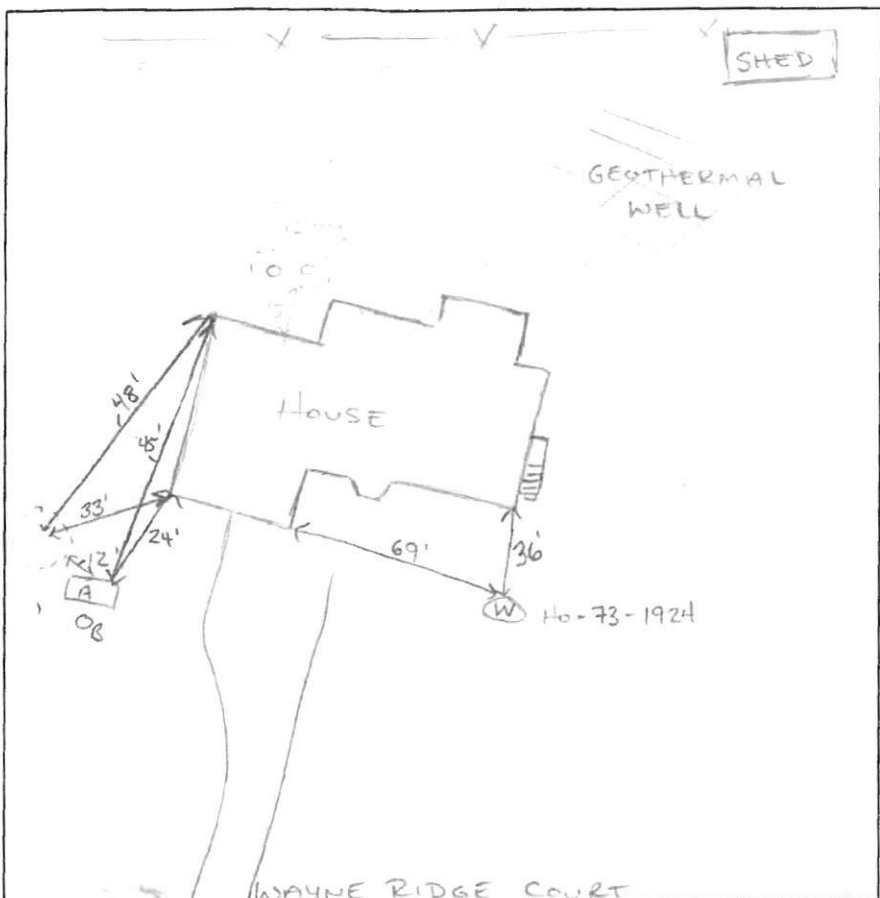
4"
12"
24"
30"

dark brown,
SLM, fine,
SBK, roots
Brown, SCL
SBK, moist
Red, SCL
P₂ mica,
SBK, moist
Gray brown
CL, act, P₂
mica, SBK,
same as
above, higher
moisture,
reflex

40"
50"
6'

Yellow-brown
SCL, few
mica, SBK
Yellow-red,
SCL, SBK,
firm,

WAYNE RIDGE STREET



SHELF/BOTTOM

DATE	TEST #	DEPTH	START	BREAK 1" DROP	STOP 2" DROP	TIME OF 2ND INCH	P/F/H
04/21/2021	A	6' / 16'	REFUSE				F
		7' / 16'	0:00				
		16'	BOTTOM POUR				P
04/21/2021	B	0' / 1'	0:00	3:00	1500	10:00	P

BIS
PERC
HOLE
DUG
AT
GRADE

REMARKS DRY WELL IS FULL AND UNDER SURFACE HYDRAULIC PRESSURE

SANITARIAN CARAHUG 001997 BACKHOE FREEDOM OTHERS HOME OWNER

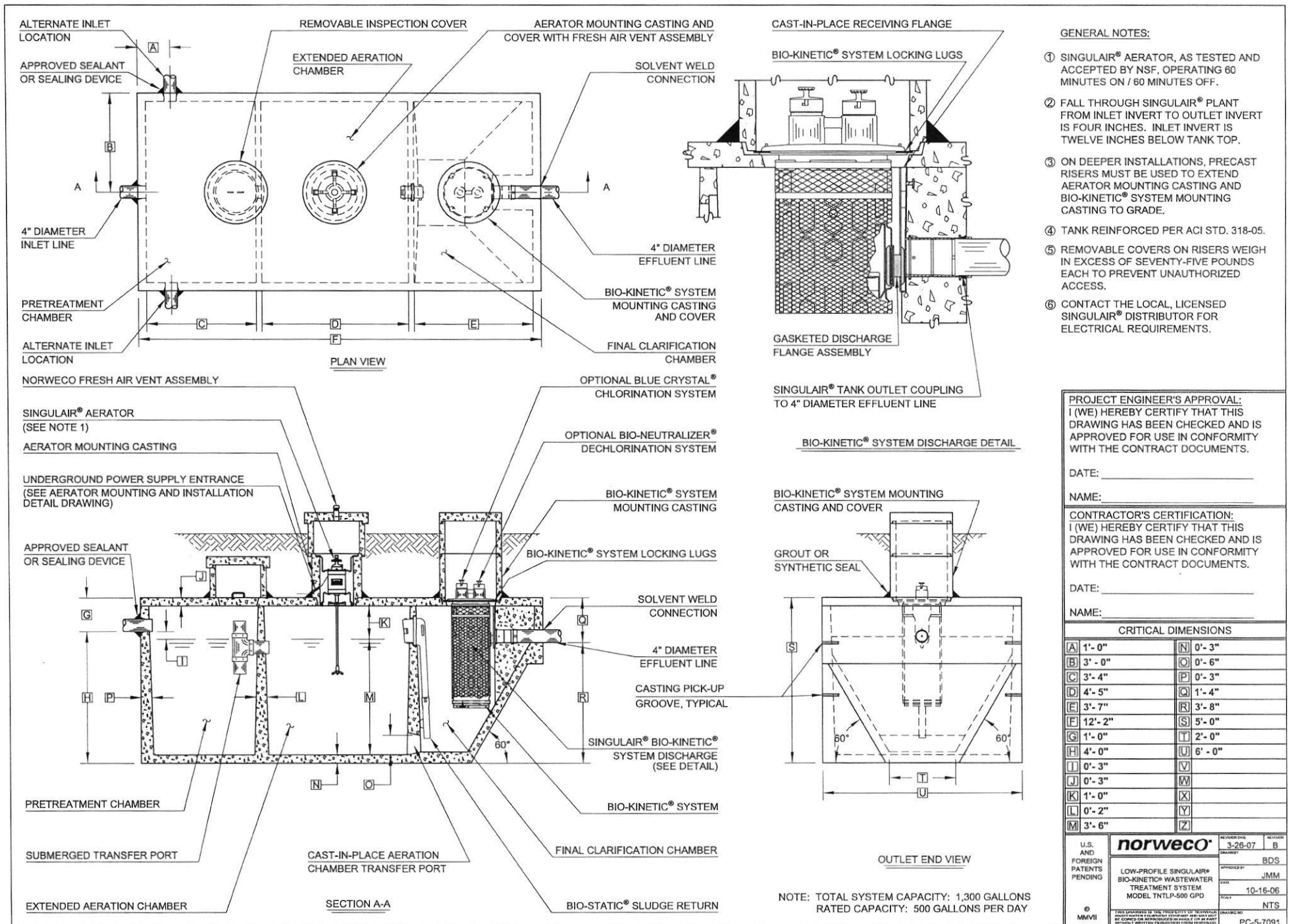
TEST HOLES USED IN SDA _____ AVG. PERC TIME 301.725 4987 SQ. FT/BR 4 (15)

TRENCH WIDTH _____ INLET DEPTH _____ MAX. BOT DEPTH _____ EFFECTIVE SW _____

301.256 7415

System Component #1 – Primary Treatment



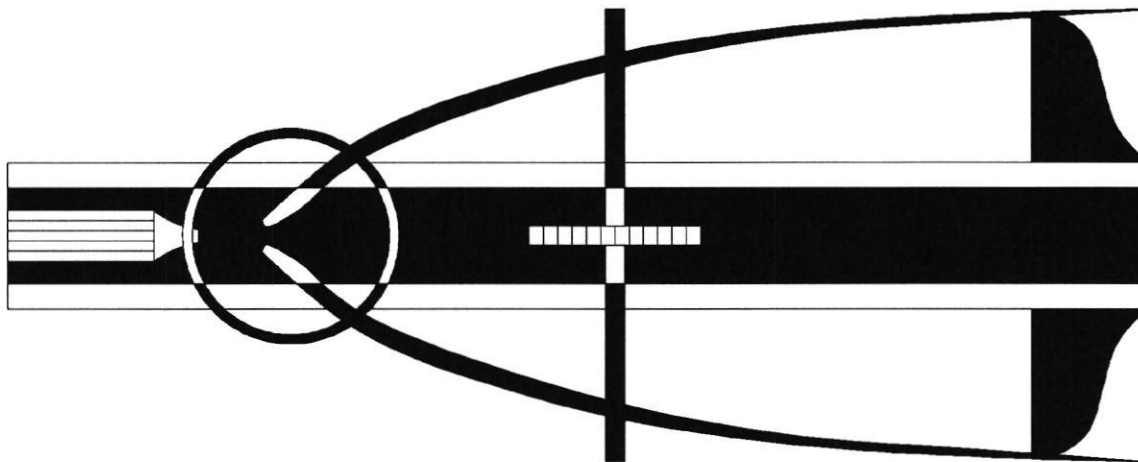


norweco[®]

SINGULAIR[®] BIO-KINETIC[®]
WASTEWATER TREATMENT SYSTEM
MODEL TNT

GENERAL SPECIFICATIONS

The contractor shall furnish and install one complete Singulair Bio-Kinetic Model TNT system for Total Nitrogen Treatment with all necessary parts and equipment as described in the following specifications. Treatment of the domestic wastewater shall be accomplished by the extended aeration process with non-mechanical flow equalization, pretreatment of the influent and filtration of the final effluent. In addition to primary, secondary and tertiary treatment of the wastewater flow, the treatment system shall provide nitrification, denitrification, and if required, chlorination and dechlorination of the effluent prior to discharge. All treatment processes shall be contained within reinforced precast concrete tankage meeting the requirements of ACI Standard 318. The wastewater treatment system shall be a Singulair Model TNT as manufactured by Norweco, Inc., Norwalk, Ohio, USA. Systems utilizing fiberglass, steel, or plastic tankage are subject to flotation when dewatered and shall not be considered for this application.



The wastewater treatment system shall be capable of reducing Total Nitrogen without the addition of chemicals, specialized add-on processes or additional components. Nitrification and denitrification shall be accomplished within the chambers of the treatment system prior to effluent disposal. Biological reduction of nitrogen shall occur naturally by autotrophic bacteria, capable of converting ammonium nitrogen to nitrate and heterotrophic bacteria, capable of transforming nitrate to harmless gas. The treatment system shall include precast concrete tankage providing separate pretreatment, aeration and clarification chambers. Principal items of electro-mechanical equipment shall be a 1725 RPM mechanical aerator, UL listed Service Pro control center with MCD technology, Bio-Static sludge return and Bio-Kinetic tertiary treatment device for flow equalization and final filtration of system effluent.

SPECIFICATIONS

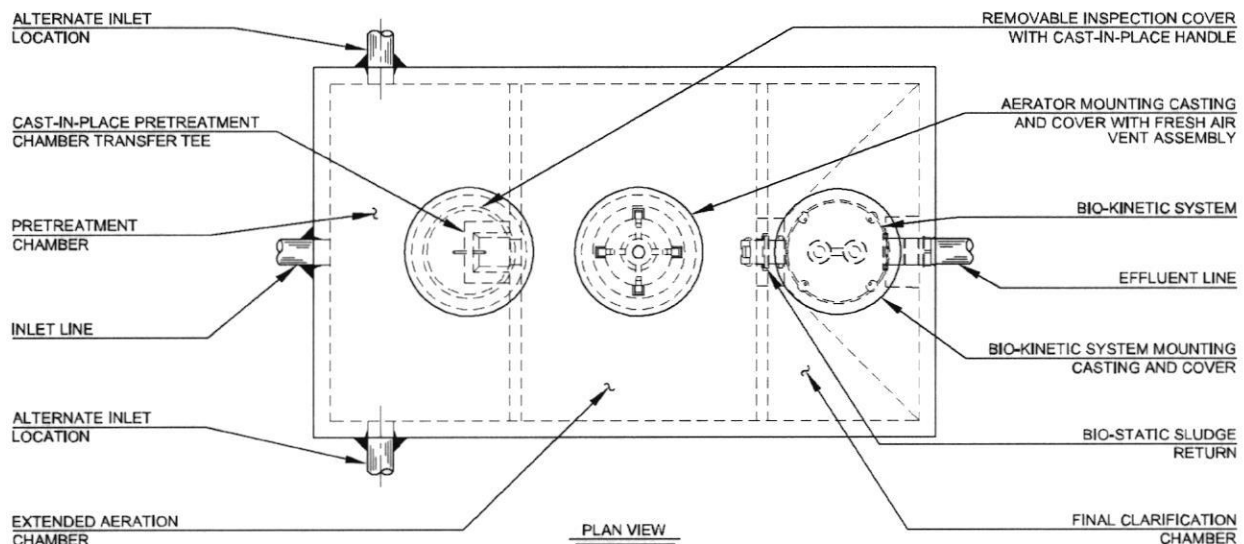
SINGULAIR®

OPERATING CONDITIONS

Total holding capacity of the system shall provide a minimum of 48 hour retention of the daily flow. The pretreatment chamber shall provide at least 18 hour retention, the extended aeration chamber shall provide at least 24 hour retention and the clarification chamber shall provide at least 6 hour retention. The non-mechanical flow equalization device shall increase each individual chamber and total system retention time in direct proportion to loading. Design of the system shall include a compartmented tank and non-mechanical flow equalization device to insure successful treatment performance without upset even when the significant runoff period is six hours. Hydraulic design considerations of the system and flow equalization device shall be such that intermittent peak flow factors as high as four shall not upset hydraulic reliability within the system. System performance in compliance with the requirements of NSF Standard 245 shall be recognized by an ANSI accredited third-party laboratory and be approved for use by the local governing regulatory agency.

PRETREATMENT CHAMBER

The pretreatment chamber shall be an integral part of the wastewater treatment system. All domestic wastewater shall be preconditioned and flow equalized while passing through the pretreatment chamber prior to being introduced to the extended aeration chamber. The outlet of the pretreatment chamber shall be equipped with a discharge tee that extends vertically into the liquid so that only the preconditioned equalized flow from the center area of the chamber is displaced to the extended aeration chamber. The discharge tee and transfer port shall be of adequate size to handle a peak flow factor of four without restricting the outlet and disturbing hydraulic displacement to the extended aeration chamber. A removable inspection cover shall be cast into the top of the pretreatment chamber to allow tank and transfer tee inspection. As a safety measure, the uncovered opening shall be small enough to insure that the tank cannot be entered for inspection or service.



AERATION CHAMBER

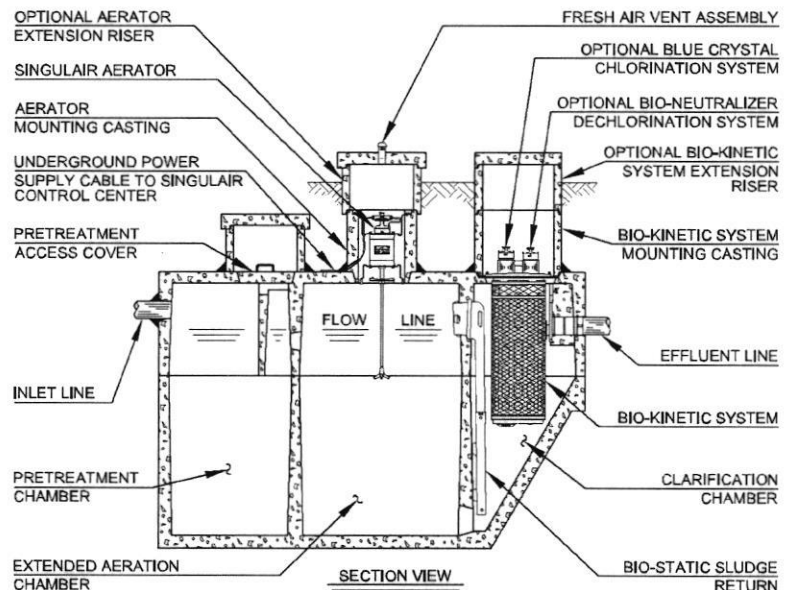
The extended aeration chamber shall provide in excess of 24 hour retention of the equalized daily flow. The chamber shall be of sufficient size to provide a minimum of 80 cubic feet of tank capacity per pound of applied BOD. The aeration chamber length-width-depth ratio shall be designed to insure uniform tank mixing and provide optimum treatment. The aeration chamber(s) shall be an integral part of the system flow path and constructed of properly reinforced 5,000 PSI, 28 day compression strength precast concrete. All castings used to construct the precast concrete tankage shall be monolithic units with external and internal walls incorporated into each section.

FINAL CLARIFICATION CHAMBER

The final clarification chamber shall consist of 5 functionally independent zones operating together to provide satisfactory settling and clarification of the equalized flow. An inlet zone shall be provided and shall dissipate transfer turbulence at the flow inlet of the clarification chamber. Its performance shall also eliminate turbulence in other zones of the clarifier. Liquid shall be hydraulically displaced from the inlet zone to the sludge return zone. Hydraulic currents shall sweep settled sludge from the hopped walls and return these solids via the inlet zone to the aeration chamber. As solids are removed, liquid is displaced to the hopper zone of the clarifier. In this zone, settling by gravity takes place. Three of the four sidewalls are slanted to form a hopper which directs all settled material back to the sludge return zone. Clarified liquid from the hopper zone shall be displaced into the final settling zone to provide additional clarification of the liquid. The liquid is finally displaced to the outlet zone for final filtration and discharge from the system. Non-mechanical equalization of the flow, through all 5 independent zones, shall provide optimal settling and clarification.

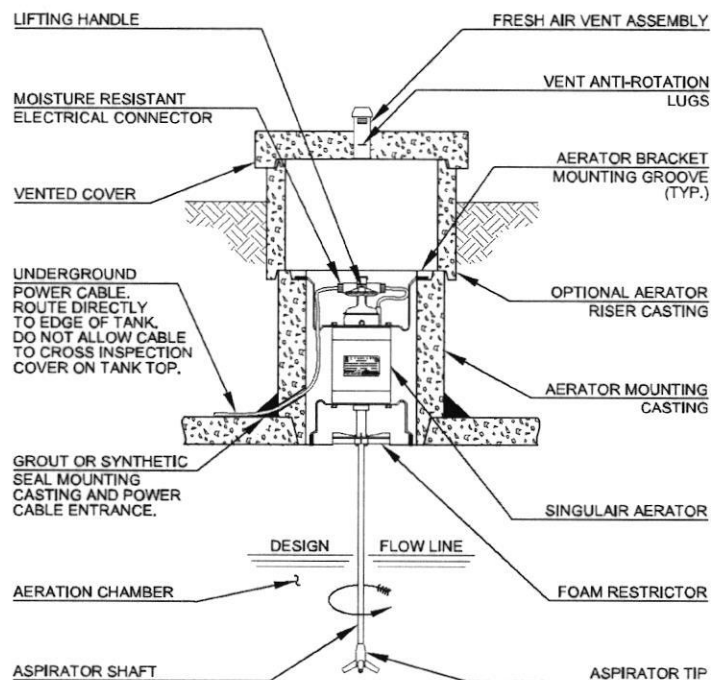
BIO-STATIC® SLUDGE RETURN

A Bio-Static sludge return shall be installed into the cast-in-place opening(s) in the aeration/clarification chamber wall to provide positive return of settled solids. Aeration chamber hydraulic currents shall enter the sludge return(s) and be directed into the sludge return zone of the clarification chamber. The Bio-Static sludge return shall accomplish resuspension and return of settled solids without disturbing the clarified liquid in the final settling zone and outlet zone.



MECHANICAL AERATOR

Each Singlair aerator shall be installed in a concrete aerator mounting casting above the aeration chamber. Fresh air shall be supplied through a molded plastic vent assembly cast into the concrete access cover above the aerator. The Singlair aerator shall include plated mounting brackets, NEMA 6 rated electrical connector, UL recognized fractional horsepower motor, molded

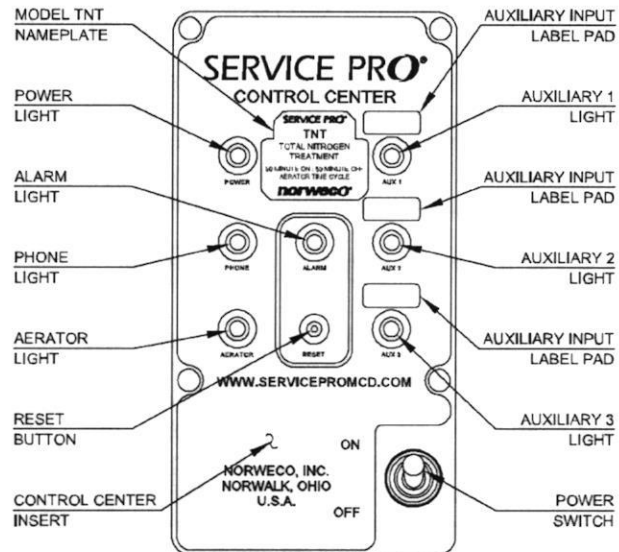


plastic lifting handle, molded plastic air intake screens, molded plastic foam restrictor, stainless steel aspirator shaft and molded glass-filled nylon aspirator tip. The motor shall contain precision manufactured o-ring type seals installed between the motor shell and the machined aluminum endbells to insure watertight integrity is maintained. Molded Viton elastomer shaft seals shall be utilized to protect the bearings from contamination. Only the stainless steel aspirator shaft and glass-filled nylon aspirator tip shall be installed in contact with the liquid. There shall be no submerged electrical motors, bearings or fixed air piping in the aeration system. Singlair aerator motors shall be designed not to exceed the motor nameplate rating when installed and operated as recommended for the system. The fractional horsepower aerator motor shall be equipped with a foam restrictor to protect the motor against high water and foam. The motor shall be 4 pole, 1725 RPM, 115 volt, 60 Hertz, single phase, ball bearing constructed with a 1.0 service factor. It shall draw less than 4.0 amps when operating at the rated nameplate voltage. Aerator motors without UL recognition have not demonstrated compliance with international electrical standards for safety and reliability and shall not be considered for this application.

BIO-KINETIC®

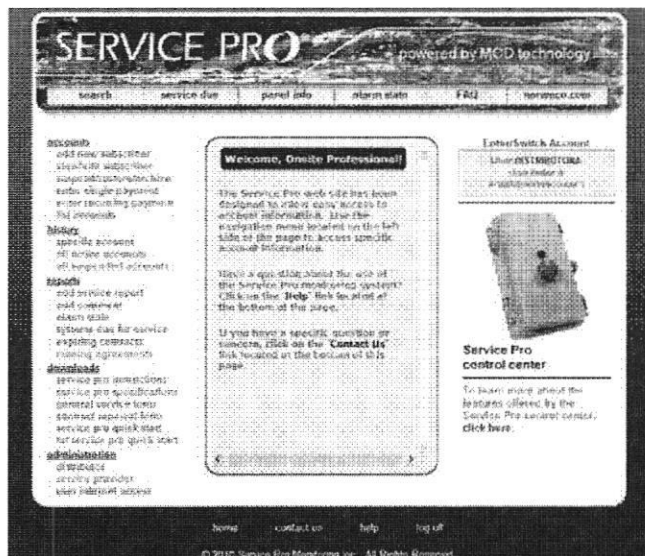
SERVICE PRO® CONTROL CENTER

The Service Pro electrical control center with MCD technology shall provide Monitoring, Compliance and Diagnostic functions for the Singulair treatment plant using a microprocessor based platform. The Service Pro control center shall contain nonvolatile memory to prevent loss of programming in the event of a power failure. The pre-wired controls shall be mounted in a lockable NEMA rated enclosure designed specifically for outdoor use. Each Service Pro control center shall be a UL listed assembly and shall include a factory-programmed timer, alarm light, reset button, power switch, power light, phone light, aerator alarm light and three auxiliary alarm lights. The control center shall monitor all treatment system operating conditions including aerator over current, aerator under current and open motor circuit. In the event the control center detects one of these conditions, power to the aerator shall be interrupted, a diagnostic sequence shall begin and the visual alarm shall activate. After a programmed recovery interval, an automatic restart attempt shall be initiated. If normal aerator operation does not resume during 24 programmed recovery and restart cycles, the audible alarm shall activate and the telemetry system shall report the specific condition to the Service Pro monitoring center. In the event that any of the auxiliary inputs detect abnormal operation of the treatment system auxiliary equipment, the audible and visual alarms shall immediately activate and the telemetry system shall report the alarm condition to the monitoring center. The service provider shall automatically be notified by the Service Pro monitoring center of the specific alarm condition using phone, fax or email.



AERATOR TIME CYCLE

A factory-programmed timer built into the Service Pro control center shall provide a total of twelve hours of aerator operation per day. The non-adjustable timer shall create a 60 minute aeration cycle followed by a 60 minute anoxic cycle during which the aerator shall be off. Use of an aerator timer can seriously affect system performance and operating cost. Systems that have not been performance certified, at a timed aeration cycle, by an independent ANSI accredited testing laboratory shall not be considered for this application.



www.servicepromcd.com

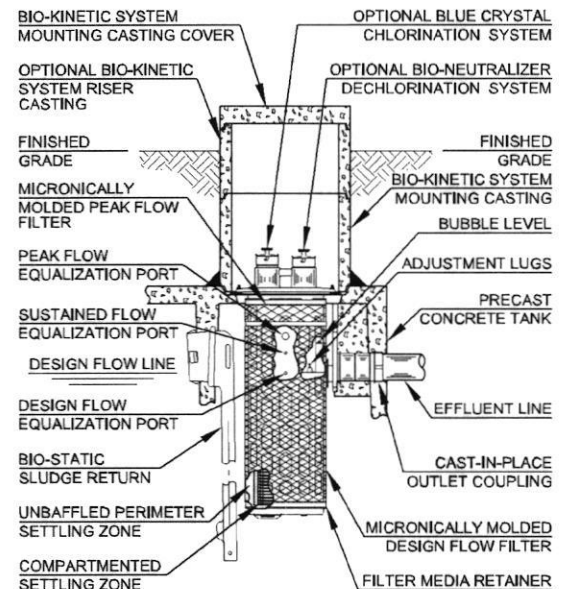
SERVICE PRO® MONITORING CENTER

The Service Pro monitoring center shall include a 128 bit encrypted password protected website for interface with the monitoring center database. Access to the secure website shall be obtained through a unique user name and password that provides tiered access to data from monitored treatment systems. Access level tiers shall include distributors, service providers, regulatory agencies and individual system owners. Distributors and service providers shall be able to create accounts, maintain service records and grant regulatory agencies access to the information. Individual system owners shall be able to view information regarding their own wastewater treatment systems, as well as download and print instructional information. Integrity of stored data shall be maintained through the use of multiple servers operating in geographically isolated locations.

SPECIFICATIONS

BIO-KINETIC® SYSTEM

A Bio-Kinetic system shall be installed in the mounting casting(s) above the clarification chamber. Each Bio-Kinetic system shall provide non-mechanical flow equalization through all plant processes including pretreatment, aeration, clarification, tertiary filtration, chlorination and dechlorination. The assembly shall be supplied with locking lugs and removable moisture/vapor shield and shall consist of a design flow and peak flow micronically molded filter, baffled perimeter settling zone, flow distribution deck, lifting handles, level indicator, adjustment lugs, optional chlorination feed tube, unbaffled perimeter settling zone, solids contact zone, vertical inlet zone, compartmented settling zone consisting of 42 baffled chamber plates, effluent stilling well, final discharge zone, adjustable outlet weir, optional dechlorination feed tube, outlet zone and gasketed discharge flange. All components shall be manufactured from inert synthetic materials or rubber, assembled in circular fashion and connected to a plastic outlet coupling. The outlet coupling shall accept a 4" diameter, Schedule 40, PVC pipe. Each Bio-Kinetic system shall be installed with the inverts of the design flow equalization ports located at the normal liquid level of the clarifier. If intermittent flow rates exceed the capacity of the design flow ports, flow shall be held upstream until the intermittent flow dissipates. If the intermittent flow continues to increase, the liquid level may reach a pair of sustained flow equalization ports. With four ports in use, flow through the system increases while continuing to provide flow equalization to all upstream and downstream processes. Peak flow equalization ports are supplied but should not be required in a properly sized system. Optional Blue Crystal and Bio-Neutralizer tablet feed tubes shall be positioned such that the flow-activated chemical cannot make contact with the liquid upstream of the feed tubes.



FLOW EQUALIZATION

The wastewater treatment system shall include a non-mechanical, demand use, flow equalization device. The device shall control normal residential flow rates and reduce typical residential flow surges. The flow equalization rate shall be dependent upon the specific loading pattern and the duration of flow surges. At the 600 gallon per day design loading schedule of NSF Standard 40 and NSF Standard 245, minimum performance of the device shall equalize daily flow an average of 50%.

BLUE CRYSTAL® CHLORINATION SYSTEM (Optional)

The Singlair system shall be furnished complete with a tablet feeder and a six month supply of Blue Crystal disinfecting tablets. Blue Crystal tablets shall be specifically formulated for consistent chlorine dosage and effluent disinfection to the sustained, variable and intermittent flows that are typical of domestic wastewater treatment systems. The tablets shall be manufactured from pure calcium hypochlorite and contain a minimum of 70% available chlorine. Each tablet shall be 2⁵/₈" diameter, compressed to a 1" thickness, weigh approximately 5 ounces and be white in color with blue crystals for easy identification. The tablets shall dissolve in direct proportion to the flow rate, releasing controlled amounts of chlorine.

BIO-NEUTRALIZER® DECHLORINATION SYSTEM (Optional)

The Singlair system shall be furnished complete with a tablet feeder and a six month supply of Bio-Neutralizer dechlorination tablets. The dechlorination tablets shall contain active ingredients specially formulated to chemically neutralize both free and combined chlorine. Each tablet shall be 2⁵/₈" diameter, compressed to a 1³/₁₆" thickness, weigh approximately 5 ounces and be green in color for easy identification. The tablets shall dissolve slowly, releasing controlled amounts of chemical for the instantaneous removal of residual chlorine from the system effluent.

WARRANTY AND EXCHANGE PROGRAM

The manufacturer shall provide a three year limited warranty for each Singulair aerator, Service Pro control center and Bio-Kinetic system purchased from the manufacturer. A comprehensive exchange program offers Singulair owners a lifetime of equipment protection. The distributor shall provide warranty and exchange program details to the regulatory agency, contractor and customer as required.



EQUIPMENT MANUFACTURER

The equipment specified herein shall be the product of a manufacturer having a minimum of seven years experience in the construction of prefabricated wastewater treatment equipment and systems. Bids shall be prepared on the basis of the equipment and material specified herein for purposes of determining the low bid. This is not done, however, to eliminate other products or equipment of equal quality and efficiency. If equipment is to be substituted, approval of such substitution must be made prior to execution of any order. It is assumed that substitution will result in a reduction of cost to the contractor and that if accepted, these savings will be passed along by a reduction in the base bid.

SINGULAIR® MODEL TNT DATA CHART

Designation: Model TNT	500 GPD	750 GPD	1000 GPD	1250 GPD	1500 GPD
Daily Treatment Capacity (Gallons Per Day)	500/600	750/800	1000	1250	1500
Total System Capacity (Gallons)	1300	1600	2300	2850	3400
Number of Singulair Aerators	1	1	2	2	2
Number of Bio-Kinetic Systems	1	2	2	3	3
Number of Bio-Static Sludge Returns	1	1	1	2	2
Drawing Number (PC-5-)	7103	7065	7067	7068	7069

PROGRESS THROUGH SERVICE SINCE 1906

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and wastewater treatment*

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www.norweco.com

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SINGULAIR[®] BIO-KINETIC[®]

WASTEWATER TREATMENT SYSTEM WITH SERVICE PRO[®] CONTROL CENTER

MODELS 960 AND TNT OWNER'S MANUAL

INTRODUCTION

The Singulair system is the finest equipment available and utilizes the most up-to-date wastewater treatment technology. It is a sound investment that protects you and the environment. Please take the time to familiarize yourself with the contents of this manual.

HOW THE SINGULAIR[®] SYSTEM WORKS

Developed to serve homes and small businesses beyond the reach of city sewers, the Singulair system employs the extended aeration process. Similar to the treatment method used by most municipal wastewater treatment facilities, this process involves a natural, biological breakdown of the organic matter in wastewater.

Wastewater enters the pretreatment chamber where anaerobic bacterial action combines with the effects of gravity to precondition the waste before it flows into the aeration chamber. Once in the aeration chamber, aerobic bacteria utilize the organic matter in the wastewater to biologically convert the waste into stable substances. Following aeration, flow is transferred to the clarification chamber where the effects of gravity settle out biologically active material. The Bio-Static sludge return, located in the clarification chamber, creates hydraulic currents that gently transfer settled particles back to the aeration chamber. As clarified liquids pass through the Bio-Kinetic system, they are filtered, settled and flow equalized. As a result, complete pretreatment, aeration, clarification and final filtration are assured. The Singulair system reliably protects you, your property and the environment.

FEATURES AND ADVANTAGES

Singulair tanks are reinforced precast concrete, manufactured by the licensed Norweco distributor. Internal walls and baffles are cast-in-place to insure uniformity and maximum strength. Risers and access covers are either heavy duty plastic or concrete construction. All components within the system that will contact the wastewater are constructed entirely of molded plastic, stainless steel or rubber.

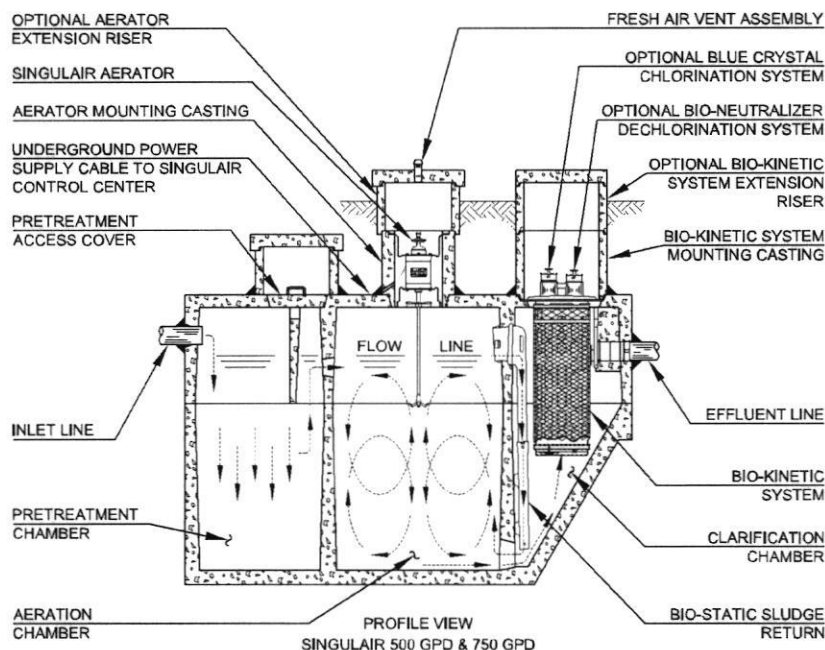
The Singulair aerator is powered by a 1725 RPM, 115 volt, 60 hertz, single-phase, fractional horsepower motor. It is the only electrically powered component in the Singulair

system. The aerator has been designed specifically for use in the Singulair system. It costs less to operate and consumes fewer kilowatt hours of electricity than most major appliances.

Singulair aerators are supplied with a Service Pro control center with MCD technology. The NEMA rated control center contains a power switch and time clock that control aerator operation. The local distributor's name, address and telephone number are displayed on the control center cover.

All system controls and necessary owner information are conveniently located at your fingertips.

Non-mechanical flow equalization and final filtration is accomplished within the Singulair tank by the Bio-Kinetic system. This revolutionary device is installed in the clarification chamber and connected to the system outlet. Optional chlorination and dechlorination may be included in the Bio-Kinetic system if required. All Singulair components work together to assure complete pretreatment, aeration, clarification and final filtration.



SINGULAIR® SYSTEM PERFORMANCE

Rivaling the performance of the most advanced wastewater treatment plants in the world, the Singulair system complies with USEPA wastewater treatment guidelines for secondary treatment systems and meets all requirements of NSF/ANSI Standard 40. In ecologically sensitive areas, the most stringent effluent standards are 10 mg/L CBOD and 10 mg/L TSS. Rated Class I after successfully completing the 7 month Standard 40 test protocol, the Model 960 system averaged effluent of 6 mg/L CBOD and 10 mg/L TSS. The Model TNT system averaged effluent of 4 mg/L CBOD, 9 mg/L TSS and 12 mg/L Total Nitrogen.

OPERATIONAL REQUIREMENTS

The Singulair system is designed to treat only domestic wastewater. Domestic wastewater is defined as the waste generated from a typical residence. This includes flows originating from: bathtubs, clothes washers, dishwashers, drinking fountains, water coolers, food grinders, kitchen sinks, lavatories, mop basins, service sinks, shower stalls, sinks, wash sinks, water closets and whirlpool baths. While the use of bio-degradable detergents is recommended, the Singulair system has been designed to handle any reasonable amount of bathroom, kitchen or laundry waste. However, some care should be exercised to insure that non-biodegradable and/or toxic materials are not disposed of via the domestic wastewater plumbing. Do not use the plumbing system for disposal of lint, cooking grease, scouring pads, diapers, sanitary napkins, cotton balls, cotton swabs, cleaning rags, dental floss, strings, cigarette filters, rubber or plastic products, paints and thinning agents, gasoline, motor oil, drain cleaners or other harsh chemicals. These items could plug portions of the plumbing, interfere with biological treatment, accumulate in the treatment system and adversely affect system performance. Never connect roofing down spouts, footer drains, sump pump piping, garage and basement floor drains or water softener backwash to the domestic wastewater plumbing or the treatment system. Water softener backwash will interfere with biological treatment and must be disposed of separately.

ELECTRICAL REQUIREMENTS

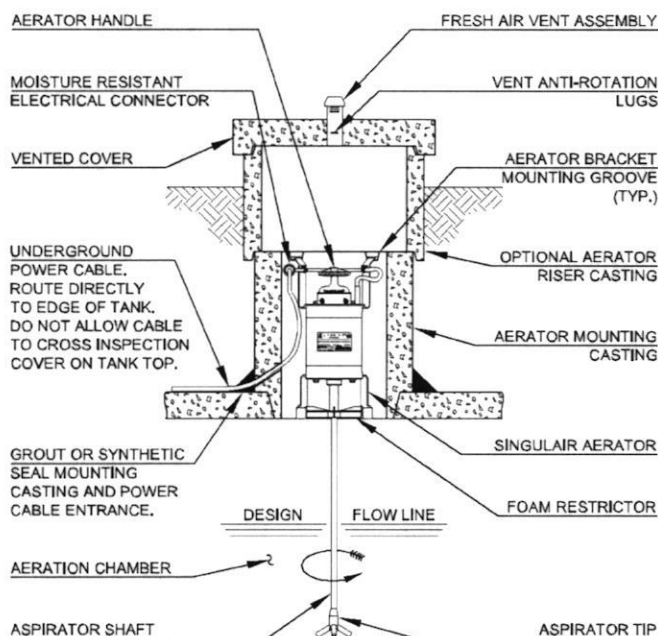
Each Singular control center must be wired to a dedicated 115 VAC, single-phase circuit at the main electrical service panel. A 15 amp circuit is recommended (10 amp minimum). A pictorial wiring diagram is provided inside the control center enclosure. All electrical work must be performed in accordance with the requirements of the National Electrical Code and all applicable local codes. Electrical connections should be made only by a qualified electrician following proper procedures and using safe tools.

CAUTION: Any time service is required, first shut off the dedicated circuit breaker in the main electrical service panel. Next, shut off the power switch in the Singulair control center. Failure to do so could result in personal injury or equipment damage.

SINGULAIR® AERATOR

The aerator has been specifically designed for use in the Singlair system and includes special alloy and molded plastic parts to prolong aerator life. Aerator bearings are pre-lubricated and sealed. Singlair aerators are installed in a concrete mounting casting above the aeration chamber. Fresh air enters the aerator through four intake ports located under the aerator handle. The air is drawn down the hollow aspirator shaft where it is introduced below the liquid surface. Only the molded plastic aspirator and the lower portion of the stainless steel aspirator shaft are submerged.

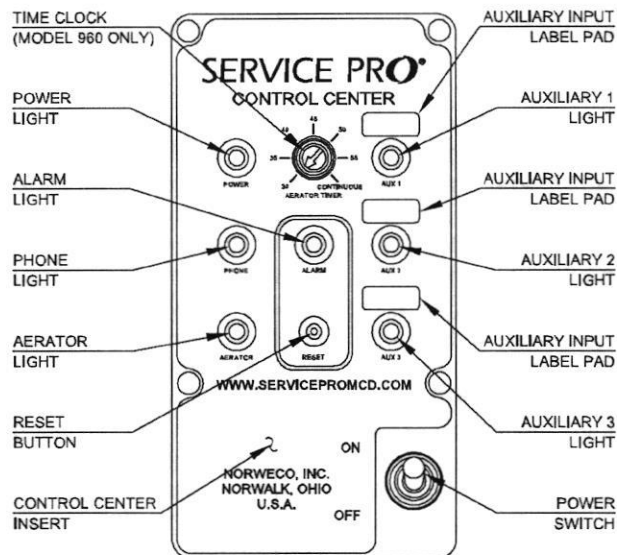
The aerator is not designed to run under water and will automatically shut off if a high water condition occurs. If the liquid rises to the level of the foam restrictor, the control center will shut off power to the aerator. Next, an automatic diagnostic sequence begins, as outlined in the section titled "Service Pro Control Center"



Each Singulair aerator is a precision engineered electro-mechanical device. Do not remove it from its installed position. Do not attempt any type of repair. Contact your Singulair service provider if service is needed. Unauthorized tampering or repair will void important provisions of the limited warranty and exchange program.

FRESH AIR VENTING SYSTEM

An aerator vent assembly is cast into the concrete access cover above each aerator. The vent assembly supplies fresh air to the aerator, which is drawn through the aspirator and into the wastewater. Finished landscaping should be maintained six inches below the top of the vented access cover and graded to drain runoff away from the cover. Do not allow plants, shrubbery, mulch or landscaping of any type to restrict the flow of air to the vent assembly or obstruct the access cover.



SERVICE PRO® CONTROL CENTER

Every Singulair aerator is supplied with a prewired UL Listed Service Pro control center featuring MCD technology to permit fully automatic aerator operation. The control center provides MONITORING, COMPLIANCE and DIAGNOSTIC functions complete with telemetry for communication with the Service Pro remote monitoring center. If an alarm condition occurs for any reason within the Singulair system or monitored auxiliary equipment, the red alarm light will flash. If aerator operation has been interrupted, the Service Pro control center will attempt to restart the aerator every five minutes for two hours. If the aerator does not restart after two hours, the audible alarm will sound. If the Singulair system is covered by a Service Pro monitoring agreement, the Singulair service provider will be automatically notified and the alarm condition will be displayed on the remote monitoring center website, www.servicepromcd.com. Each control center for the Model 960 treatment system is supplied with a time clock adjustable in five minute increments up to continuous run. This clock is factory preset to run 30 minutes per hour and should only be adjusted by an authorized Singulair service provider. Each control center for the Model TNT system is supplied with a non-adjustable time clock.

SERVICE PRO® MONITORING CENTER

When connected to a telephone line, the control center will automatically notify the Service Pro monitoring center of any service required by the Singulair system or accessory components. The Service Pro monitoring center will automatically record the time and date of any alarm condition and post this information to your system's history record accessible at www.servicepromcd.com. The monitoring center will also notify your Singulair service provider that the system needs attention and record the time and date when service is performed. All information regarding your system is available to you on the secure, password protected Service Pro website. Contact your Singulair service provider for your user name and password.

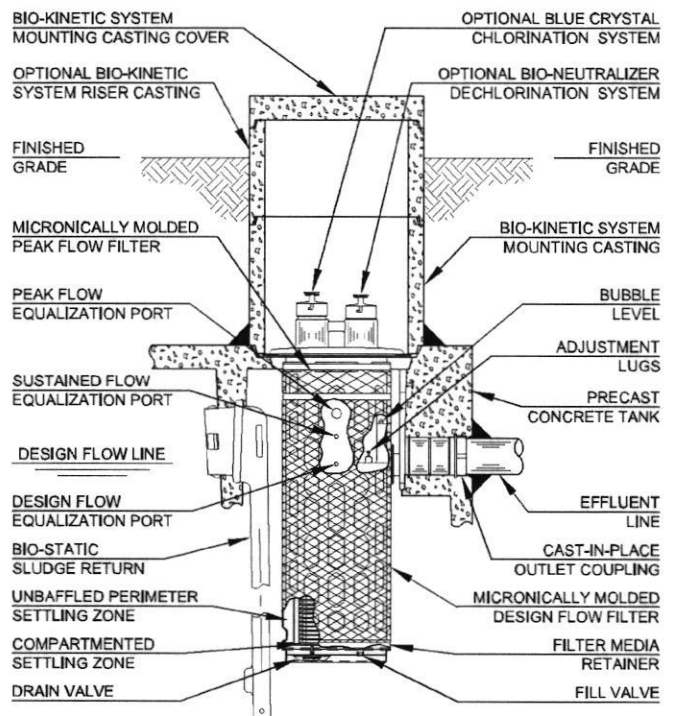
NOTE: The control center regularly communicates with the Service Pro monitoring center using your telephone line and a toll free number. If the control center is using the line when you attempt to place a call, a high pitched digital communication signal will be heard. Hang up all telephones sharing the line and wait a few seconds. This will automatically disconnect the control center and make the line available for use.

BIO-STATIC® SLUDGE RETURN

Each Bio-Static sludge return is installed in the aeration/clarification chamber wall. Aeration chamber hydraulic currents enter the sludge return(s) and transfer solids from the clarification chamber back to the aeration chamber for additional treatment. The Bio-Static sludge return accomplishes resuspension and return of settled solids without disturbing the contents of the clarification chamber.

BIO-KINETIC® SYSTEM

Bio-Kinetic systems provide non-mechanical flow equalization through all plant processes. The Bio-Kinetic system contains 3 separate filtration zones, 8 independent settling zones, optional chlorination and dechlorination tablet feed systems and serves as its own chlorine contact chamber. When used with Blue Crystal disinfecting tablets, the performance of the Bio-Kinetic system as a chlorination device is certified to NSF/ANSI Standard 46, Section 11. All components are manufactured from plastic or rubber. Your service provider has the necessary training, tools and equipment for removal and cleaning. If your Bio-Kinetic system is in need of service, contact your service provider. During each semi-annual service inspection, your service provider will remove and clean the Bio-Kinetic system or replace it with a unit from their service stock.



NON-MECHANICAL FLOW EQUALIZATION

The patented design of the Bio-Kinetic system provides non-mechanical flow equalization for the Singulair wastewater treatment plant. Equalization reduces incoming hydraulic surges (e.g. typical shower of 10 minutes duration, bathtub discharge of 5 minutes duration, clothes washer discharge of 2 minutes duration and dishwasher discharge of 2 minutes duration) throughout the system. The flow equalization provided by the Bio-Kinetic system causes wastewater to be held upstream of the final outlet during hydraulic surges, which preserves treatment integrity and enhances system operation. The actual rate of equalization varies and depends upon specific loading patterns and the duration of each flow surge. At the design loading pattern used during the NSF/ANSI Standard 40 performance evaluation, the Singulair system equalizes all flow an average of 48%. As a result, hydraulic surges and periods of high wastewater flow are automatically reduced to protect the environment and all treatment plant processes on a demand use, as needed, basis.

BLUE CRYSTAL® RESIDENTIAL DISINFECTING TABLETS

If local regulations require, an initial supply of Blue Crystal disinfecting tablets will be placed in the Bio-Kinetic system chlorine feed tube(s) at system start-up. Specifically formulated for use in the Singulair system, Blue Crystal disinfecting tablets provide efficient and reliable disinfection when effluent chlorination is desirable. Manufactured from calcium hypochlorite, Blue Crystal disinfecting tablets provide effective, economical bacteria killing power. Liquid entering the Bio-Kinetic system contacts the installed Blue Crystal disinfecting tablets, just downstream of the equalization ports. A fully charged feed tube will last an average of six months. During each semi-annual inspection, your Singulair service provider will check system operation, the rate of tablet consumption and install tablets during routine service inspections.

NOTE: USEPA guidelines state "On the average, satisfactory disinfection of secondary wastewater effluent can be obtained when the chlorine residual is 0.5 ppm after 15 minutes contact." Retention time must comply with the controlling regulatory jurisdiction.

CAUTION: *The improper handling of Blue Crystal tablets may cause personal injury or property damage. Keep out of the reach of children and do not allow the tablets or feed tube to contact skin, eyes, or clothing. Tablets may be fatal if swallowed and tablet dust is irritating to the eyes, nose and throat. Do not handle the tablets or feed tubes without first carefully reading the product container label, MSDS information and the handling and storage instructions. Mixing of chemicals may cause a violent reaction leading to fire or explosion. For additional information about Blue Crystal tablets contact your Singulair service provider.*

BIO-NEUTRALIZER® DECHLORINATION TABLETS

In environmentally sensitive areas, environmental regulations may require the use of Bio-Neutralizer dechlorination tablets. Manufactured as an efficient and dependable means to chemically neutralize both free and combined chlorine, Bio-Neutralizer dechlorination tablets provide consistent reduction or elimination of chlorine residual without unnecessarily reducing the level of dissolved oxygen in the treatment system effluent. Bio-Neutralizer dechlorination tablets utilize a unique chemical mixture for chlorine reduction and environmental protection. As liquid passes through the final discharge zone of the Bio-Kinetic system, the flow contacts the installed Bio-Neutralizer tablets and residual chlorine is removed from the system effluent. A fully charged Bio-Neutralizer feed tube will last an average of six months. During each semi-annual inspection, your Singulair service provider will check system operation, the rate of tablet consumption and install tablets during routine service inspections.

CAUTION: *Bio-Neutralizer tablets or feed tubes should not be mixed with Blue Crystal tablets. Do not handle the tablets or feed tubes without first carefully reading the product container label, MSDS information and the handling and storage instructions. For additional information about Bio-Neutralizer tablets contact your Singulair service provider.*

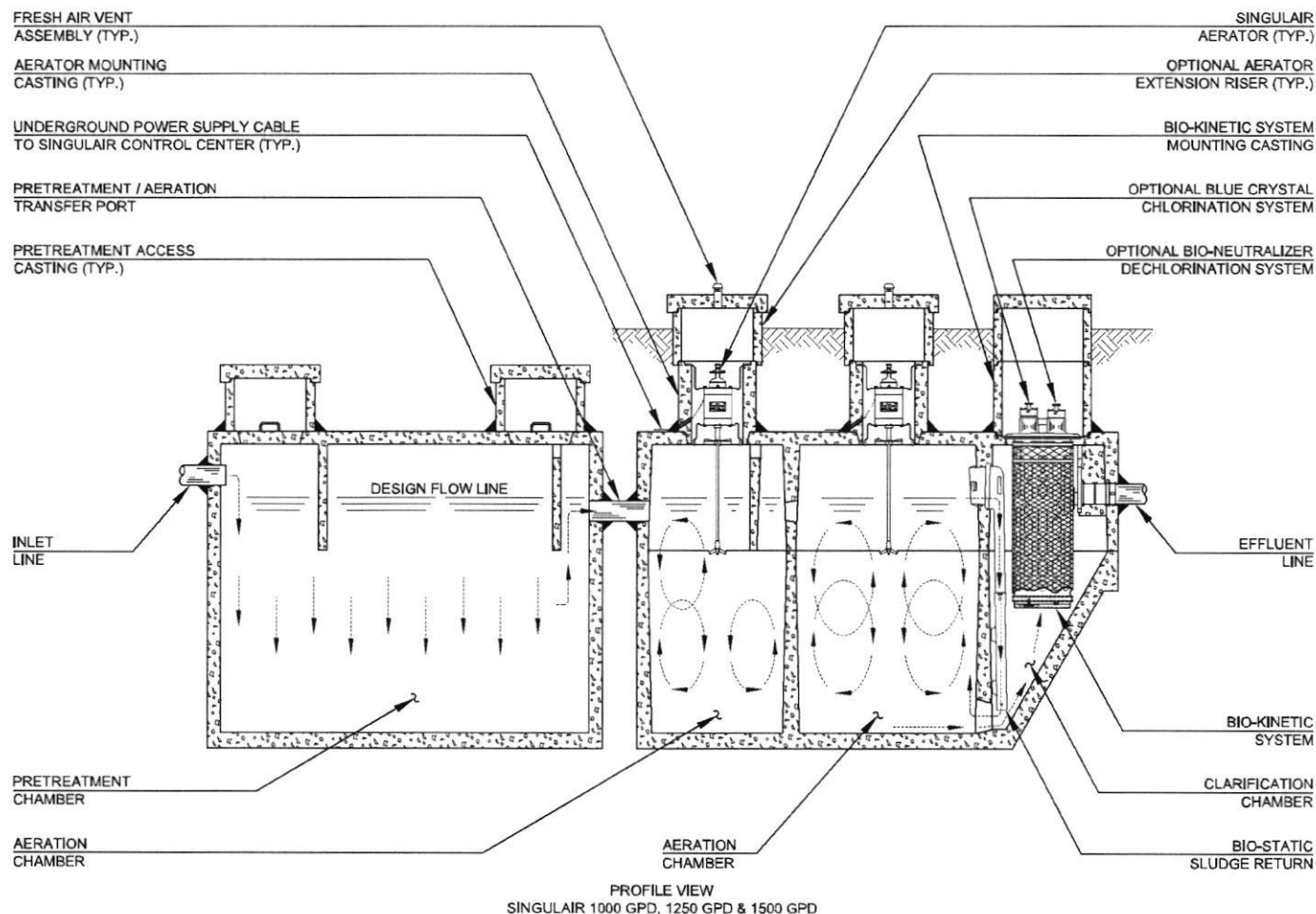
NO OWNER MAINTENANCE

The Singulair system is inspected and serviced by a local, factory-trained service provider, therefore, no owner maintenance is required during the warranty period. The Singulair system does not require pumping as often as a septic tank. Under normal use only the pretreatment chamber should be pumped. How often pumping is necessary depends on system use. The local Singulair service provider will inspect the aeration chamber contents and plant effluent at six month intervals to determine if the pretreatment chamber is discharging excessive solids. Every three years, the pretreatment chamber should be inspected. The pretreatment chamber will normally require pumping at three to five year intervals. Contact your local service provider prior to tank pumping for complete information on removal of equipment, access to individual chambers, coordination of services and proper disposal of tank contents. A tank pumping service licensed by the local regulatory agency must be used for removal and disposal of tank contents. The tank pumper should consult with local authorities to determine the proper disposal method.

If a period of intermittent use, or an extended period of non-use of the Singulair system is anticipated, contact your Singulair service provider for instructions. Your service provider has comprehensive Singulair service instructions and has been factory-trained in troubleshooting procedures. Contact your service provider if you require service or information regarding tank pumping.

SINGULAIR® SERVICE PROGRAM

Semi-annual service inspections, at six month intervals for the first two years of system operation, are provided by your local Norweco distributor and are included in the original purchase price of the Singulair system. Costs for travel and labor are not charged to the owner. During an inspection, each mechanical aerator, Bio-Kinetic system and other plant components are serviced as outlined in the Singulair Service Manual. After the initial two year service program is completed, the local service provider will provide continued service at the owner's option. The service program should be renewed by the owner to insure maximum system performance.



Ask your Singulair service provider about a renewable service contract. If you allow service coverage to expire, you can still obtain the professional assistance of a factory-trained technician. However, these special service calls will be performed on a time and materials basis. Professional service is important to proper system operation and should not be allowed to lapse. Be sure to consider the advantages of a renewable service contract.

The Singulair service provider will perform the following services during each service inspection:

- | | |
|--|--|
| ✓ Check aerator operation | ✓ Inspect outlet coupling |
| ✓ Check aerator power consumption | ✓ Install a clean Bio-Kinetic system |
| ✓ Check aerator air delivery | ✓ Fill Blue Crystal feed tube |
| ✓ Clean stainless steel aspirator shaft | ✓ Fill Bio-Neutralizer feed tube |
| ✓ Clean aspirator tip | ✓ Inspect effluent quality |
| ✓ Clean fresh air vent in concrete cover | ✓ Inspect outlet line |
| ✓ Inspect aeration chamber contents | ✓ Inspect ground water relief point |
| ✓ Check operation of control center | ✓ Inspect effluent disposal system |
| ✓ Adjust time clock when required | ✓ Complete 3-part service record |
| ✓ Remove the Bio-Kinetic system | ✓ Hang owner's record on front door |
| ✓ Scrape the clarification chamber | ✓ Enter record into www.servicepromcd.com |
| ✓ Inspect the Bio-Static sludge return | ✓ Mail health department notification |

WARRANTY REGISTRATION

A Warranty Registration Card was included with the Model 206C aerator before it was shipped from the factory. If this card has not been returned to Norweco, complete and mail it immediately. If it is not returned within thirty days of the installation date, the three year limited warranty and lifetime aerator exchange program will begin on the date of component shipment from the factory.

Remove the aerator model number and serial number record card and store it in a safe location with this Owner's Manual for future reference. If it is necessary to call your service provider for service, make note of the information on the control center data plate and the aerator serial number before calling. Warranty and service records are cross-indexed by owner name, aerator serial number or control center serial number. Supplying the aerator serial number and control center serial number with the service request will give the service provider a ready reference so that changes in system ownership will not delay service.

SINGULAIR® LIMITED WARRANTY

The Singulair aerator enjoys the distinction of being the only aerator on the market today backed by a lifetime warranty and exchange program. Each Singulair aerator, Service Pro control center, Bio-Kinetic system and any other components manufactured by Norweco, are warranted to be free from defects in material and workmanship, under normal use and service, for a period of three years from the date of purchase. The three year limited warranty is included in the original purchase price of every Singulair system. The comprehensive aerator exchange program offers Singulair owners a lifetime of protection. Owners with a Singulair system may exchange any aerator of any age for a replacement unit at a prorated cost. If the Singulair aerator or Service Pro control center fails, do not use or dismantle the unit. The local, licensed distributor has detailed warranty and exchange information and should be contacted for service or replacement instructions.

SERVICE PRO® SECURITY LOG IN

For your convenience, record your www.servicepromcd.com access information here:

User name:	Password:
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SUPPLEMENTAL SERVICE RECORD

For your reference, please document service performed on the following chart:

DATE	DESCRIPTION

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