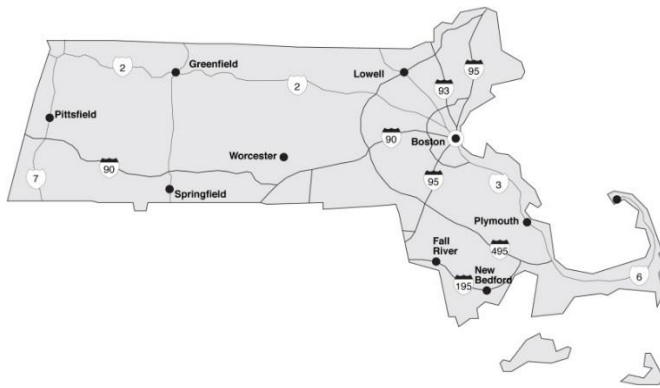


Design and Installation Manual for the Infiltrator ATL System in Massachusetts



The purpose of this manual is to provide the minimum specifications for design and installation of the Infiltrator ATL (Advanced Treatment Leachfield) System in Massachusetts. All local ordinances, requirements, and procedures must be followed. Each revised version of this manual supersedes the previous version.

The configurations presented in this document are common designs and are provided for illustrative purposes. They are not intended to restrict the use of other configurations, which may be utilized provided the design conforms to the Title 5 of the State Environmental Code 310 CMR 15.000 as applicable.

For more detailed design and installation information, please contact Infiltrator at 1-800-221-4436.

Infiltrator ATL System in Massachusetts

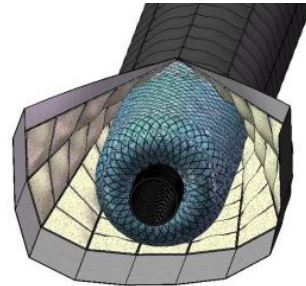
INTRODUCTION	2
SYSTEM CONFIGURATIONS	5
SYSTEM DESIGN	10
SYSTEM DESIGN EXAMPLE	13
INFORMATION FOR SYSTEM OWNERS	15
INSTALLATION INSTRUCTIONS	17
SYSTEM COMPLETION FORM	20
WARRANTY	21

Massachusetts

The Infiltrator ATL System

The Infiltrator ATL is a patent-pending, proprietary system consisting of six components. Upon entering the Infiltrator ATL, septic tank effluent progresses through each component as follows:

- nominally 12-inch-diameter conduit
 - 4-inch-diameter pipe
 - Large-diameter synthetic aggregate
 - Coarse geotextile
 - Small-diameter synthetic aggregate
 - Fine geotextile
- 6-inch depth of specified system sand.

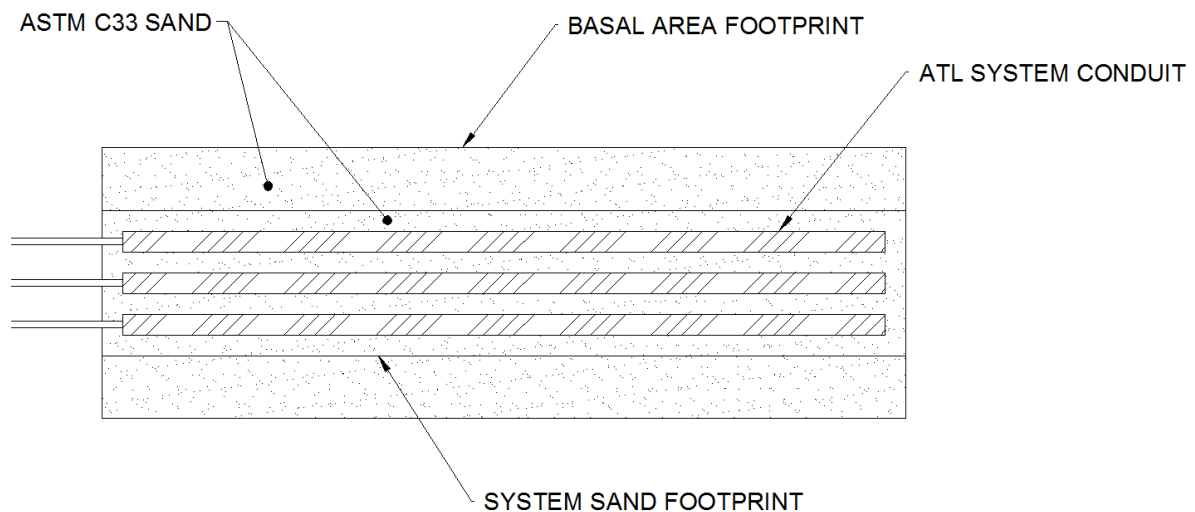


Infiltrator ATL Conduit

System Sand

“System sand” is the term used to describe the coarse sand material that surrounds the Infiltrator ATL System (ATL System) conduits. Acceptable material for use as system sand is material which meets ASTM C33 specifications.

In this document, the “system sand footprint” refers to the surface onto which the ATL System conduits are placed and the 6 inches of component sand. The “basal area footprint” refers to the interface between the lowermost surface of the system sand and native soil. These definitions are portrayed in the diagram below.



Information Specific to Use of the ATL System in Massachusetts

The ATL System is approved for general and remedial use in the State of Massachusetts by the Massachusetts Department of Environmental Protection (MassDEP) in accordance with Title 5 of the State Environmental Code 310 CMR 15.000 (Title 5). Testing has determined that the Infiltrator ATL System treats domestic strength wastewater to NSF/ANSI Standard 40 Class I levels, which allows for design and installation of the ATL System in the State of Massachusetts in accordance with the instructions in this manual.

If design, installation, operation, or maintenance specifications are not specifically addressed in this manual, relevant requirements in Title 5 shall be applicable.

Elevated Systems

When any portion of the ATL System is above original grade, the ATL System is considered to be an elevated system. ATL Systems designed and installed as elevated systems shall include 3-foot fill material extensions on each side of the ATL System before tapering. Tapering shall be a maximum of 3/1.

In all elevated system applications, the fill material must extend a minimum of 15 feet beyond the system sand bed at the breakout elevation before the 3:1 side slope tapering may begin.

All elevated systems shall be designed and installed in accordance with 310 CMR 15.252 and 15.255.

Breakout Elevation

The breakout elevation in elevated system applications is the elevation of the bottom of the system sand, which is 6 inches below the ATL conduit rows.

Sloping Sites

In all applications where the ATL System will be installed at greater than 10%, a 6-inch-deep, 3-foot-long sand extension must be added on the downslope side.

Fill Material

Material meeting the requirements of 310 CMR 15.255(3), or system sand, shall be considered acceptable material for use in fill material extensions and to increase the height of the ATL System in order to meet vertical separation distance requirements.

Fill material must extend a minimum of 15 feet beyond the outside aspect of the top of the ATL conduit rows before side slope tapering may begin (see drawings on Pages 6-9).

Fill Extensions

A fill extension is the area between the system sand and the side slope taper in elevated system applications.

INTRODUCTION

Cover Material

Cover shall be comprised of material that is capable of sustaining plant growth and shall be a minimum of 6-inches deep. Maximum cover depth shall be 48”.

Inspection/Monitoring Ports

Each ATL system, or each individual bed in a multiple-bed system, shall include a monitoring port.

Designer and Installer Training

Training will be offered on a regular basis, and recommended by the company. However, it will remain voluntary on the part of ATL System designers and installers.

Designer & Installer Requirements

ATL System installers must complete an “Infiltrator ATL System Completion Form” with each system installed and submit a copy to Infiltrator. See page 21 for a copy of this form, and submission instructions.

ATL System designers must provide the system owner with a copy of the most recent ATL System “*Approval for General or Remedial Use*”, and a copy of this manual.

Both designers and installers must meet all condition in the “*Standard Conditions for Alternative Soil Absorption Systems with General Use Certification and/or Approved for Remedial Use*”.

Vertical and Horizontal Separation Distances

Vertical and horizontal separation distances shall be measured from the outside aspect of the system sand within the basal area footprint. All ATL Systems shall comply with the setback requirements as specified in Title 5.

Minimum System Area

All ATL Systems shall provide a minimum of 400 square feet of basal sand area in new construction applications.

Minimum ATL Conduit Lengths

In residential applications, the ATL System shall be designed and installed with a minimum of 70 linear feet of conduit per bedroom.

In large flow applications, the ATL System shall be designed and installed with a minimum of 70 linear feet of conduit per 100 gallons of flow per day.

System Configurations

The Infiltrator ATL System can be designed for use with residential-strength wastewater on level and sloped, subsurface and above-ground sites. Examples are shown in the following pages.

The following minimum system sand dimensions are required for all Infiltrator ATL System configurations:

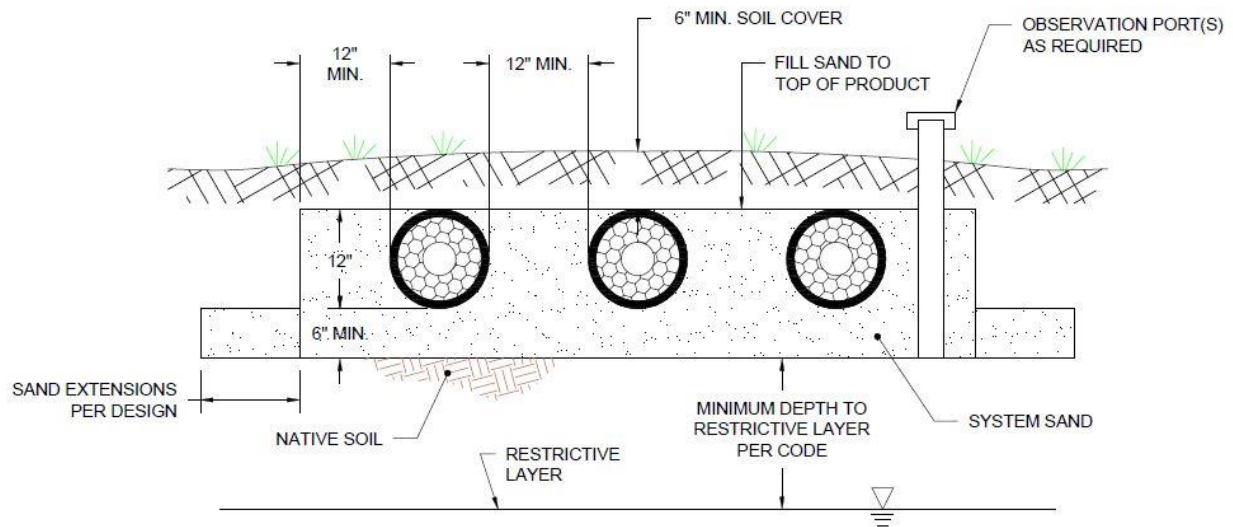
- a minimum of 6 inches below the Infiltrator ATL conduit rows;
- a minimum of 12 inches between adjacent Infiltrator ATL conduit rows; and
- a minimum of 12 inches on both sides and both ends of the Infiltrator ATL System conduit footprint.

There is no minimum requirement for system sand on top of the ATL conduit rows.

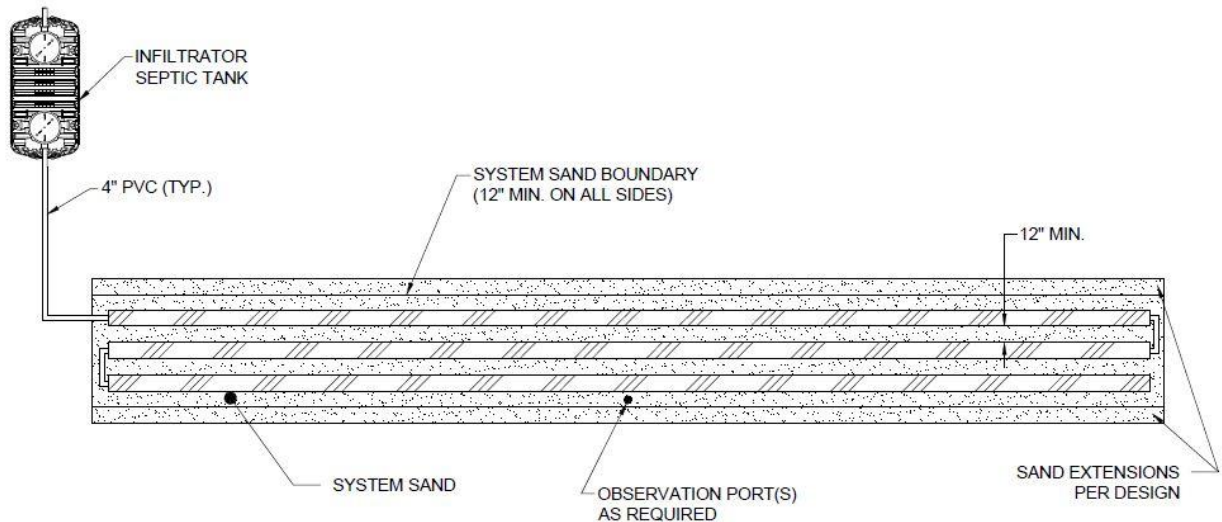
Additional requirements apply depending upon site-specific slope conditions and the position of the Infiltrator ATL System relative to ground surface elevation.

Level Subsurface Systems

Cross-Section View



Plan View

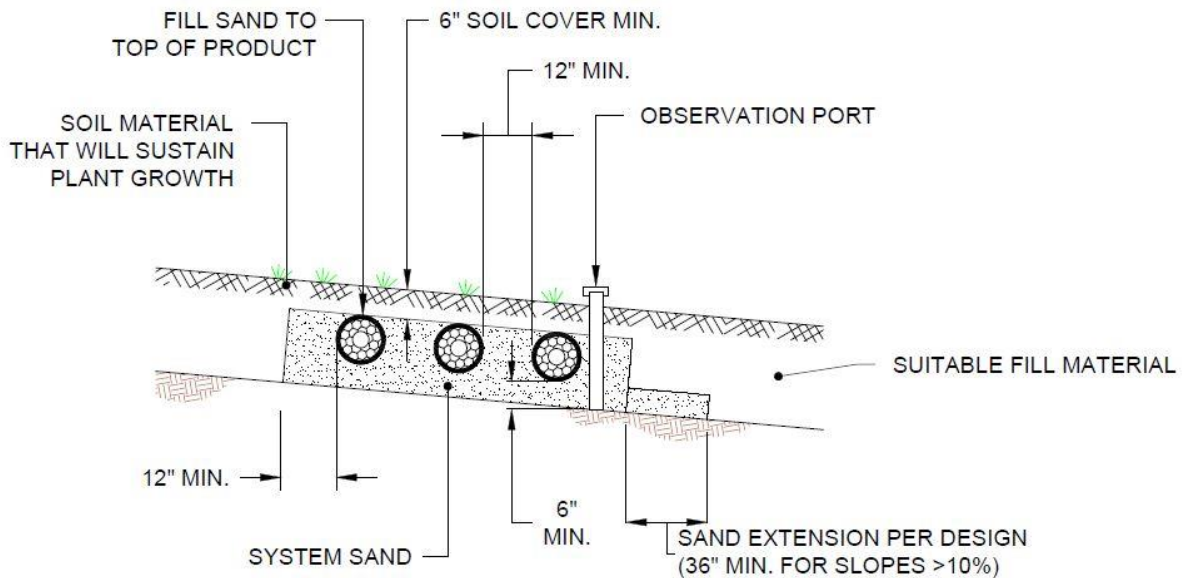


NOTES:

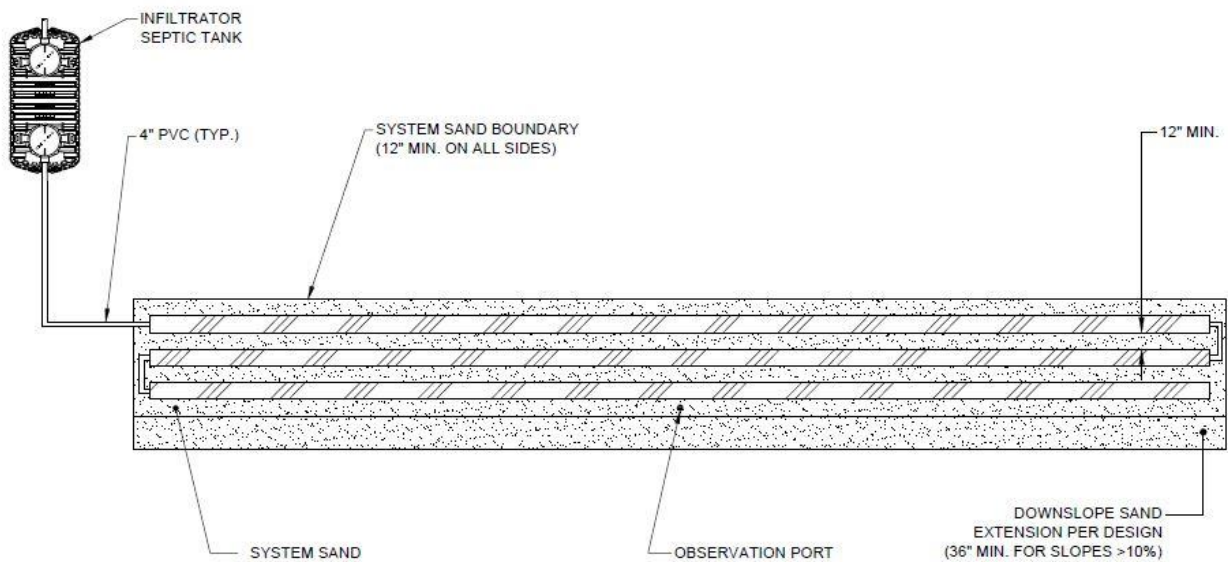
1. Number and length of conduits per design.
2. Serial distribution shown, but system may be served by distribution box or manifold, per state and local regulations.
3. Venting is not required but is optional at the discretion of the designer.
4. Pumping is not required unless gravity flow cannot be achieved.

Sloped Subsurface Systems

Cross-Section View



Plan View

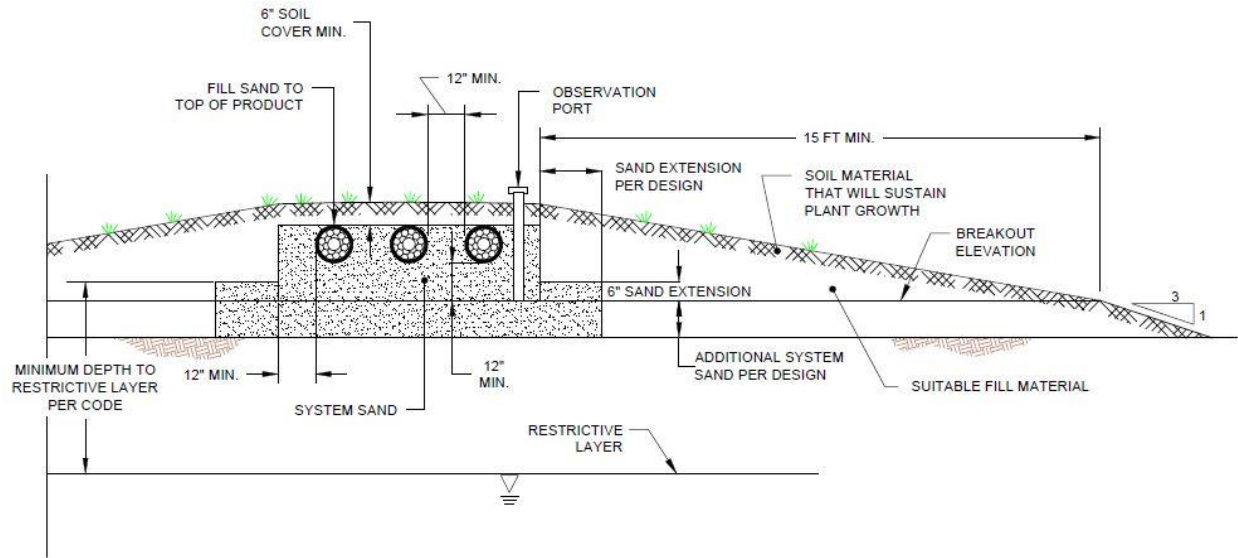


NOTES:

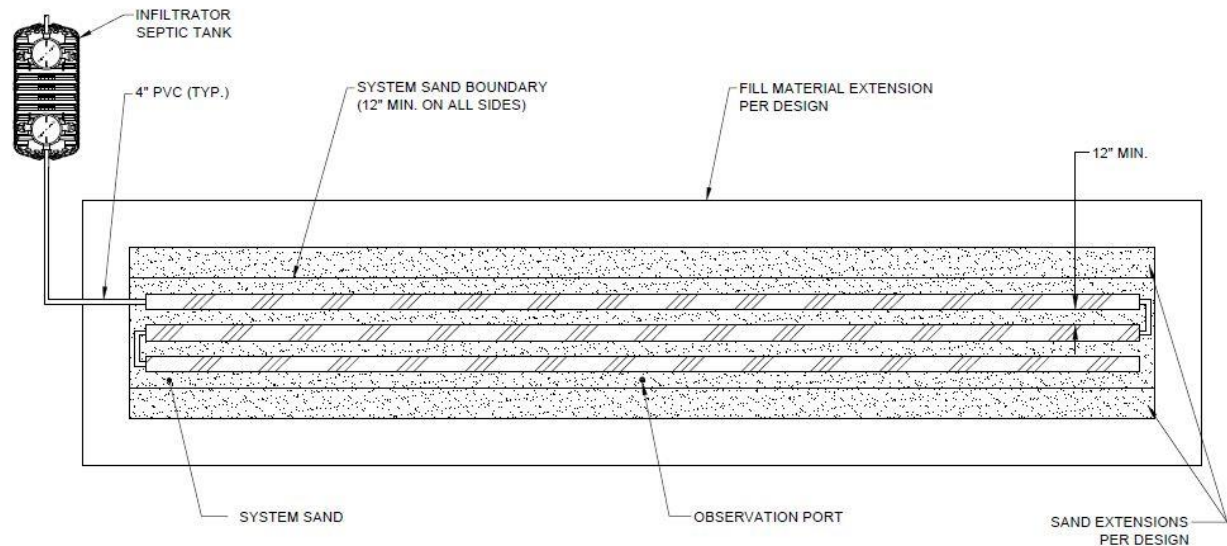
1. Number and length of conduits per design.
2. Serial distribution shown, but system may be served by distribution box or manifold, per state and local regulations.
3. Venting is not required but is optional at the discretion of the designer.
4. Pumping is not required unless gravity flow cannot be achieved.

Level Above-Grade Systems

Cross-Section View



Plan View

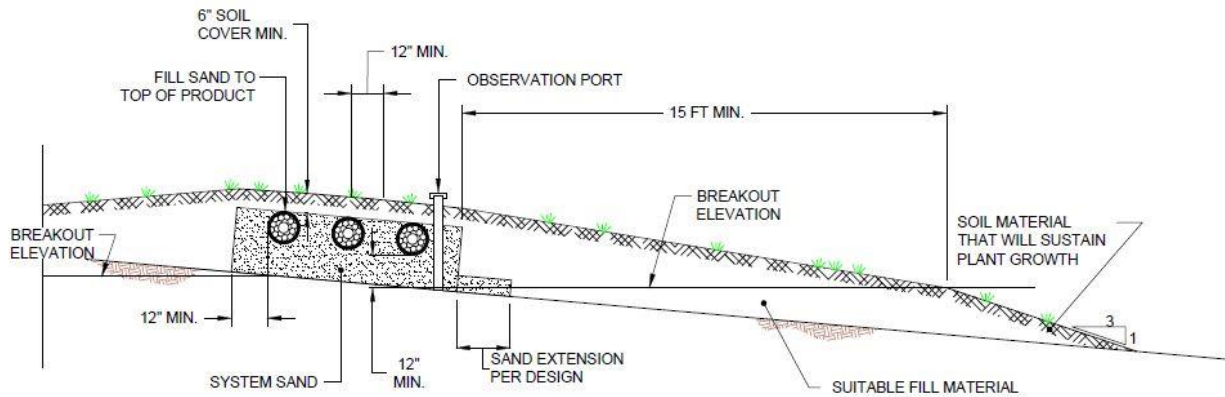


NOTES:

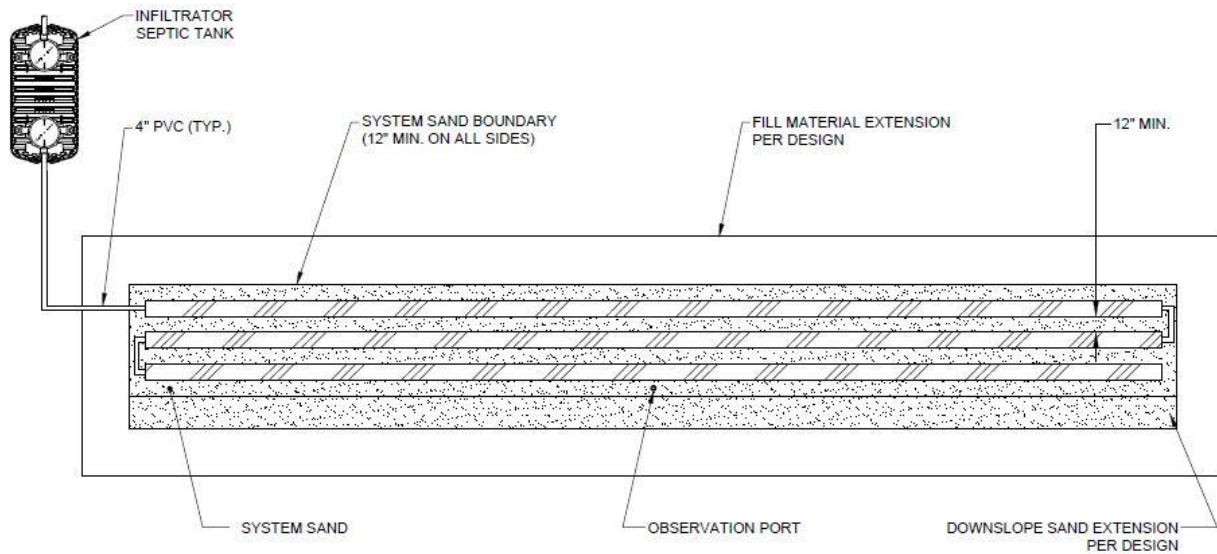
1. Number and length of conduits per design.
2. Serial distribution shown, but system may be served by distribution box or manifold, per state and local regulations.
3. Venting is not required but is optional at the discretion of the designer.
4. Pumping is not required unless gravity flow cannot be achieved.

Sloped Above-Grade Systems

Cross-Section View



Plan View



NOTES:

1. Number and length of conduits per design.
2. Venting is not required but is optional at the discretion of the designer.
3. Pumping is not required unless gravity flow cannot be achieved.

System Design

Designing the Infiltrator ATL System in Massachusetts is a four-step process.

1. Determine the minimum total length of Infiltrator ATL conduit required
2. Design the system sand configuration
3. Determine the minimum basal area required
4. Make adjustments to the system sand footprint if necessary

Step 1: Determine the minimum total length of Infiltrator ATL conduit required

Determine the minimum total length of Infiltrator ATL conduit from Table 1, based on the soil profile from the site evaluation and the number of bedrooms.

Bedrooms						Large Flows (per 100 gpd)
2	3	4	5	6	Add'l	
140	210	280	350	420	70	70

Table 1: Minimum total length of ATL conduit required

Step 2: Design the system sand configuration

Use Table 2 to determine the minimum system sand footprint using the minimum length of Infiltrator ATL conduit as determined from Table 1 and the number of rows into which the total length of conduit will be divided. The following requirements must be met for design of the system sand:

- The system shall be designed as long and narrow as site conditions allow. Therefore, the number of rows of Infiltrator ATL conduit shall be minimized.
- The maximum length of ATL conduit rows is 100 feet, therefore, where the row-specific length dimensions exceeds 100 feet in Table 2, the system shall be divided as follows:
 - Center-fed configurations are recommended, with effluent distributed from the center area between the ATL conduit rows.
 - Where a center-feed configuration is not used, the system shall be split into multiple sand beds with proportional loading between beds based on effluent flow distribution.

Minimum Length of ATL Conduit (ft)	Minimum System Sand Dimensions and Area					
	2 Conduit Rows		3 Conduit Rows		4 Conduit Rows	
	Dimensions (W x L)	Area (sf)	Dimensions (W x L)	Area (sf)	Dimensions (W x L)	Area (sf)
140	5' x 72'	360	7' x 52'	364	9' x 42'	378
210	5' x 112'	560	7' x 72'	504	9' x 62'	558
280	5' x 142'*	710	7' x 102'	714	9' x 72'	648
350	5' x 182'*	910	7' x 122'	854	9' x 92'	828

Table 2: Minimum system sand dimensions and area

**These configurations include conduit row lengths of greater than 100', and must use center-feed distribution or the flow must be split among multiple beds. When multiple beds are used, the placement of the beds must be end to end, instead of side by side, where site conditions permit.*

NOTE: Lengths in Table 2 are rounded up to 10' increments.

Step 3: Determine the minimum basal area required

Use the percolation rate and soil classification for the site to determine the minimum required basal area using Tables 3 and 4. The minimum allowable basal area is 400 sf.

Perc Rate (min/in)	2 Bedroom (220 GPD)				3 Bedroom (330 GPD)				4 Bedroom (440 GPD)			
	Soil Classification				Soil Classification				Soil Classification			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	400	400			400	400			400	440		
6	400	400			400	400			400	440		
7	400	400			400	400			400	440		
8	400	400			400	400			400	440		
10		400				400				440		
15		400	400			400	535			471	714	
20		400	400			400	582			498	776	
25		400	400			495	600			660	800	
30		400	455			600	683			800	910	
40			528				792				1056	
50			660	660			990	990			1320	1320
60			880	880			1320	1320			1760	1760

Table 3: Minimum basal area (sf) for 2-, 3-, and 4-bedroom homes

Perc Rate (min/in)	5 Bedroom (550 GPD)				6 Bedroom (660 GPD)				Commercial @ 100 GPD			
	Soil Classification				Soil Classification				Soil Classification			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	446	550			535	660			81	100		
6	471	550			566	660			86	100		
7	485	550			582	660			88	100		
8	500	550			600	660			91	100		
10		550				660				100		
15		589	892			707	1070			107	162	
20		623	971			747	1165			113	176	
25		825	1000			990	1200			150	182	
30		1000	1138			1200	1366			182	207	
40			1320				1584				240	
50			1650	1650			1980	1980			300	300
60			2200	2200			2640	2640			400	400

Table 4: Minimum basal area (sf) for 5- and 6-bedroom homes and commercial applications

Note: If the soil is determined to perc between two rates, the slower of the two shall be used for design purposes.

Step 4: Make adjustments to the system sand footprint if necessary

The minimum areas determined in Steps 2 and 3 cannot be reduced. These areas must be maintained to ensure adequate area for placement of the Infiltrator ATL System conduit rows and infiltration of treated effluent into the native soil.

Area adjustments are necessary as follows:

- If the minimum basal area determined in Step 3 is smaller than the area of the system sand footprint determined in Step 2, no adjustments are necessary.
- If the minimum basal area determined in Step 3 is larger than the area of the system sand footprint determined in Step 2, the system sand footprint must be increased.

In most instances, the width of the system sand component is increased to provide additional system sand footprint area. When making adjustments to the width of the system sand footprint:

- In level system applications, additional width shall be evenly divided on each side of the Infiltrator ATL System;
- In sloped system applications, additional width shall be entirely placed on the downslope side of the Infiltrator ATL System.

NOTE: *The length of the bed area may be altered, but only by extending the Infiltrator ATL System conduit rows. This method is preferred over increasing the width of the system if site and system design considerations permit.*

System Design Example

The following sample system design calculations are intended to illustrate the methodology for designing an ATL System in Massachusetts. The sample system design calculations are provided in the step-by-step format described above.

Sample system specifications:

- New construction, 4-bedroom home
- Percolation rate: 25 mpi
- Soil classification: Class II
- 6% slope on site

Step 1: Determine total Infiltrator ATL conduit length

Referencing Table 1, a 4-bedroom home requires a minimum of 280 linear feet of ATL conduit.

Bedrooms						Large Flow (per 100 gpd)
2	3	4	5	6	Add'l	
140	210	280	350	420	70	70

Table 1: Minimum total length of ATL conduit required

Step 2: Design the system sand configuration

Referencing Table 2, for a 210-foot conduit length, the following configurations could be used, as allowed per site conditions.

- 2 conduit rows wide – 5 ft wide x 112 ft long (560 sf)
- 3 conduit rows wide – 7 ft wide x 72 ft long x (504 sf)
- 4 conduit rows wide – 9 ft wide x 62 ft long x (558 sf)

We will assume that the designer is selecting a 3 conduit row layout. The system sand footprint utilizing a 3 conduit row layout for a four bedroom (210 linear feet of ATL conduit) residence will be 504 square feet (7' wide x 72' long).

Minimum Length of ATL Conduit (ft)	Minimum System Sand Dimensions and Area					
	2 Conduit Rows		3 Conduit Rows		4 Conduit Rows	
	Dimensions (W x L)	Area (sf)	Dimensions (W x L)	Area (sf)	Dimensions (W x L)	Area (sf)
140	5' x 72'	360	7' x 52'	364	9' x 42'	378
210	5' x 112'	560	7' x 72'	504	9' x 62'	558
280	5' x 142'*	710	7' x 102'	714	9' x 72'	648
350	5' x 182'*	910	7' x 122'	854	9' x 92'	828

Table 2: Minimum system sand dimensions and area

SYSTEM DESIGN EXAMPLE

Step 3: Determine the minimum basal area required

Referencing Table 3 and using the percolation rate of 25 mpi and the Class II soil classification for the site, it is determined that the minimum required basal area is 660 sf.

Perc Rate (min/in)	2 Bedroom (220 GPD)				3 Bedroom (330 GPD)				4 Bedroom (440 GPD)			
	Soil Classification				Soil Classification				Soil Classification			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1-5	400	400			400	400			400	400		
6	400	400			400	400			400	400		
7	400	400			400	400			400	400		
8	400	400			400	400			400	400		
10		400				400				400		
15		400	400			400	535			471	714	
20		400	400			400	582			498	776	
25		400	400			495	600			660	800	
30		400	455			600	683			800	910	
40			528				792				1056	
50			660	660			990	990			1320	1320
60			880	880			1320	1320			1760	1760

Table 3: Minimum basal area (sf) for 2-, 3-, and 4-bedroom homes

Step 4: Make adjustments to the system sand footprint if necessary

The minimum system sand footprint area determined in Step 2 is 504 square feet, and cannot be reduced. The minimum basal area determined in Step 3 is 660 square feet, and it cannot be reduced. Therefore, the system sand footprint area must be increased from 504 sf to 660 sf by the addition of one or more system sand extensions.

To accomplish this, the designer follows these steps:

- Divide the minimum basal area by the length of the system sand footprint as determined in Step 2.

$660 \text{ sf} \div 72 \text{ ft} = 9.17 \text{ ft (9 ft 2 in)}$
- Subtract the original system sand footprint width from the above adjusted system sand footprint width.

$9.17 \text{ ft} - 7 \text{ ft} = 2.17 \text{ ft (2 ft 2 in)}$
- Because this is not considered to be a sloped site (<10% slope), divide the total sand extension required (2 ft 2 in) by 2 to determine the minimum sand extension required on each side of the system.

$2.17 \text{ ft} \div 2 = 1.09 \text{ ft (1 ft 1 in)}$
- The system must be widened by 2.17 ft (2 ft 2 in), which is accomplished by adding a 1-foot, 1-inch wide sand extension to each side, resulting in a total width of 9 feet, 2 inches.

$9.17 \text{ ft} \times 72 \text{ ft} = 660 \text{ sf}$

Information for System Owners

Basic rules of onsite sewage treatment system use and care apply to the ATL System. System owners shall operate the system in accordance with the Title 5 of the State Environmental Code 310 CMR 15.000 and the following:

System Use and Abuse

Your ATL System is intended for use with residential-strength wastewater within the design daily flow volume. To ensure long-term function of your system:

- Keep daily wastewater flow within design parameters
 - Your data plate includes the daily design flow for your ATL System.
 - Do not connect the rainwater management system to, and direct water from the rainwater management system away from, the ATL System.
- Introduce only normal residential wastewater into the system
 - Solvents, paint, pharmaceuticals, aggressive cleaning products, and non-biodegradable items should not enter the ATL system.
 - Solids, such as but not limited to, cigarette butts, diapers, feminine hygiene products, cat litter, and paper towels should not be introduced into the ATL system.
- Maintain leak-free household plumbing fixtures, such as faucets and toilets.
- Do not utilize a garbage grinder.

Operation and Maintenance

Your ATL System has no specific operating instructions. Proper use of the system as noted above is the primary operating concern.

Maintenance of the ATL System includes the following:

- If the septic tank has an effluent filter, it should be cleaned by a qualified system service provider on an annual basis.
- The septic tank should be pumped on a regular basis and, if concrete, checked for leaks and cracks. The interval for septic tank pumping varies depending upon use. Check with a qualified system service provider or your local health department for the appropriate pumping interval.
- If present, the alarm system should be tested annually by the homeowner to ensure that it is functional if one is included in the system.

If at any time you have concerns about the use, operation, or maintenance of your ATL System, contact the Infiltrator Water Technologies Technical Department.

System Start-up

There are no specific requirements for placing the ATL System into service. If the system has an alarm, the property owner should, after system use has been initiated, test the alarm to ensure it is functional if one is included in the system.

Intermittent Use

The ATL System is designed for intermittent use, and requires no special attention if it is to be placed out of use for extended periods of time.

Trouble Shooting

In the event that any of the following indicators arise, contact a qualified system service provider.

- Wastewater back-up into the dwelling
- Persistent septic odor
- Unusually wet area atop and/or around the system
- “Ponding” of effluent on the lawn
- “Breakout” of effluent along the side of a slope

Repair

A qualified system service provider shall be contacted when there are indications of malfunction with the ATL System. When visiting the site, the qualified system service provider shall, at a minimum, do the following:

- Assess the present condition of the ATL System, and the surrounding area
- Research the history of use, including:
 - water volume use
 - contaminants
- Evaluate site for groundwater intrusion
- Inspect septic tank
- Inspect the ATL System conduit lines
- Check faucet and toilet function

Upon completion of the site visit, the qualified system service provider should contact the Infiltrator Water Technologies Technical Department with his or her report.

INSTALLATION INSTRUCTIONS

These installation instructions are for the ATL System in Massachusetts. ATL Systems may only be installed according to this manual, Title 5, and local health department requirements.

If unsure of the installation requirements for a site, contact your local health department. If unsure of the use of the ATL System, contact Infiltrator Water Technologies. The soil and site evaluation and the design of the onsite system must be reviewed, and a construction permit obtained from the local health department before installation.

Before You Begin

Materials and Equipment Needed

- | | |
|--|--|
| ☐ Infiltrator ATL System conduits | ☐ 4-inch inspection port and cap |
| ☐ ASTM C-33 system sand | ☐ Endcaps |
| ☐ PVC pipe and couplings | ☐ Infiltrator ATL System conduit internal pipe couplers |
| ☐ Backhoe | ☐ Tape measure |

- ☐ Laser, transit or level
- ☐ Shovel and rake

Common practices shall apply to the installation of the Infiltrator ATL System. These include, but are not limited to:

- ☐ avoid soil compaction on the infiltrative surface area, including all areas downslope of a sloped system;
- ☐ use a tracked vehicle for material installation;
- ☐ avoid installation during wet periods; and
- ☐ install the Infiltrator ATL System conduit and system sand on the same day that the system footprint is excavated/exposed.

Excavating and Preparing the Site

NOTE: *The Infiltrator ATL System may not be installed during periods when the soil is sufficiently wet to exceed its plastic limit, as this causes machinery to smear the soil.*

1. Stake out the locations of tank(s), pipes, conduit rows, and corners of the system to be tilled/excavated, per engineer design. Set the elevations as shown on the approved plan. [Note: The proper

elevation of solid PVC header line going to each Infiltrator ATL conduit row should be determined to ensure compliance with the required system bottom depth as shown on the approved permit. This height may vary dependent on system height and configuration used.]

2. Install sedimentation and erosion control measures.
NOTE: *The installation of temporary drainage swales/berms (surface diversions) may be necessary to protect the site during rainfall events.*
3. Excavate the bed area or till the ground as per the design.
4. Rake the bed bottom and sides (when applicable) if smearing has occurred during excavation. Remove large stones and protruding roots.
NOTE: *Smearing does not occur in sandy soils, so raking is not necessary. In fine textured soils (silts and clays), avoid walking on the excavation bottom to prevent compaction and loss of soil structure.*
5. Verify that the bed area is at the proper slope from side-to-side and from end-to-end using a level, transit, or laser.

Installing the System

1. Install the system sand basal layer over the entire Infiltrator ATL System area as per design. System sand should be leveled and stabilized prior to introduction of the Infiltrator ATL conduit. Installer should retain records certifying that system sand meets ASTM C-33 specifications.
2. Remove plastic stretch wrap from Infiltrator ATL conduits.
3. Place Infiltrator ATL conduits on the surface of the system sand in the configuration shown on the system design. Using the provided 4-inch-diameter internal pipe couplings, connect the Infiltrator ATL conduits end-to-end to create rows of the required length.

4. Infiltrator ATL conduit shall be installed level. A laser level or transit is recommended to ensure proper alignment.
5. Infiltrator ATL conduit rows shall be:
 - installed on a level plane with one another;
 - be installed parallel to any contours; and
 - be separated by a minimum of 12 inches of system sand.
6. In serial distribution applications, use of an offset adapter is recommended.
7. Install a cap on the end of each Infiltrator ATL conduit row that is not connected with piping.
6. Once the Infiltrator ATL conduit is placed on the surface of the system sand and distribution piping is connected to the conduits per design, additional system sand shall be ladled between and to the top of each of the Infiltrator ATL conduit rows. System sand shall also be installed on each side and at each end of the backfilled Infiltrator ATL conduit rows, per the design. This additional system sand shall be stabilized.

Installing Observation/Monitoring Ports

If observation or monitoring ports are specified in the system design:

1. Cut a 6-inch PVC pipe to the desired length, ensuring the pipe will extend a minimum of 6 inches above final grade.
2. Drill a minimum of ten ¼" to ½" holes within ½ to 6 inches of the bottom of the pipe, and wrap the bottom end of the pipe in filter fabric.
3. Install the monitoring pipe at the appropriate location, based on site conditions, and ensure the bottom of the pipe is at the bottom of the system sand footprint (at the system sand/native soil interface).
4. Install a removable, water-tight, secure cover cap.

Covering the System

NOTE: Before backfilling, the system shall be inspected and approved by a representative of the local health department, as required by Title 5 and in compliance with local ordinances and procedures.

1. Material placed around the system sand and atop the Infiltrator ATL conduit may be material that meets the requirements of 310 CMR 15.255(3) or additional system sand. However, the final 6 inches placed atop or adjacent to the Infiltrator ATL System shall be comprised of material that will sustain plant growth.
2. Backfill the bed by pushing material over the Infiltrator ATL System. It is best to mound several extra inches of soil over the finish grade to allow for settling. This also ensures that runoff is diverted away from the system. Keep a minimum of 12 inches of consolidated cover over the Infiltrator ATL conduits before driving over the system.

Note: Do not drive over the system while backfilling in sand.
3. After the system is covered, the site should be seeded or sodded to prevent erosion.

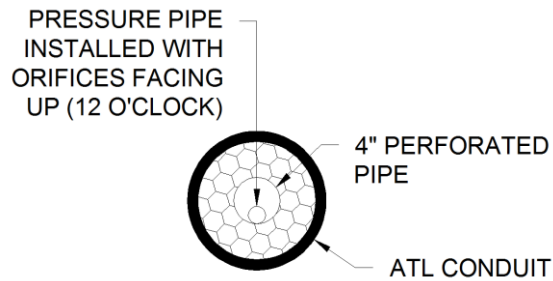
NOTE: If the system is for new home construction, it is important to leave marking stakes along the boundary of the system. This will notify contractors of the system location so they will not cross it with equipment or vehicles.

Installing Pressure Distribution

If pressure distribution is preferred, the pressure distribution system shall be designed and installed in accordance with 310 CMR 15.254 with the exception of orifice orientation. The orifices in the distribution lateral shall be oriented towards the top of the pipe.

INSTALLATION INSTRUCTIONS

The distribution laterals should be placed within the 4-inch-diameter ATL conduit distribution pipe for the entire length of each ATL conduit row, as shown below.



In order to ensure that the small-diameter laterals are placed at the bottom of the 4-inch distribution pipe within the ATL conduit row, drill an appropriately-sized hole in the 4" end cap at its bottom (see picture below):



Sweeping cleanouts should be placed at the terminal end of each lateral and be accessible from grade, and should be the same diameter piping as the main lateral.

- A ball valve or threaded cap should be located on the end of the cleanout that allows the lateral to be flushed.
- Prior to pressurization of the distribution laterals, the system should be flushed with clean water while all of the terminal ball valves are open or caps are removed.
- Cleanout access risers shall not extend past the installation depth of the drainfield and native soil or medium sand interface."

INFILTRATOR ATL SYSTEM COMPLETION FORM - MASSACHUSETTS

Property Owner	
Property Address	
Date of Installation	
Installation Contractor	
Date of Inspection	
Number of Bedrooms/Daily Design Flow (gpd) - Design¹	
Actual Number of Bedrooms/Daily Design – At time of inspection	
History of septic tank pumping	

Notes:

1. If a commercial system, inspector should create separate report with details on, at a minimum, design daily flow and effluent strength; actual daily flow and effluent strength.

Inspection Information (by note on separate document):

Installation:

- ☐ Do you have a copy of the ATL System design plan(s)?
- ☐ Do the number of bedrooms in the residence match the design specifications?
- ☐ Is the ATL System in the correct position on the site?
- ☐ Is there at least 6 inches of system sand below the ATL conduit rows?
- ☐ Is the inlet header to ATL conduit row at the correct elevation?
- ☐ Does ATL System sand meet minimum specifications?
- ☐ Has plastic stretch wrap been removed from the ATL conduits?
- ☐ Are the ATL conduit rows level from inlet to outlet?
- ☐ Are ATL conduit rows installed parallel to the contour?
- ☐ Are the ATL conduit rows separated by a minimum of 12 inches of system sand?
- ☐ Does installed separation between conduit rows meet the design specifications in the system plans?
- ☐ Is there a minimum of 12 inches of system sand on the outside aspect of the outermost ATL conduit rows?
- ☐ Is there a minimum of 12 inches of system sand extending beyond both ends of the ATL conduit rows?
- ☐ Was the system sand beside and around the ATL conduit rows stabilized prior to installation of cover?
- ☐ Does the depth of the cover material meet the design specifications in the system plans?
- ☐ Is the cover material capable of sustaining plant growth?

Function:

- ☐ What is the condition of the septic tank?
- ☐ What is the condition of the ground surface in the area above the ATL System?
- ☐ What is the condition of the ground surface in the area around the outside of the ATL System? Is there any breakout or runoff?
- ☐ Were steps taken to prevent runoff from entering the ATL System?
- ☐ Is there evidence of damage (traffic loading, etc.) to the area above the ATL System?
- ☐ Is there any settling of the cover material atop the ATL System?
- ☐ Note any other pertinent observations.

Qualified System Installer/Inspector Information

Name of System Inspector		
Business Address		
Contact Information (phone; email)		

A copy of this form must be completed with each installation and/or inspection and submit a copy to Infiltrator. This may be faxed to 860-577-7244 or emailed to info@infiltratorwater.com.

WARRANTY

INFILTRATOR WATER TECHNOLOGIES, LLC ("Infiltrator")

ATL SYSTEM STANDARD LIMITED WARRANTY

- (a) The structural integrity of the Infiltrator ATL System conduits manufactured by Infiltrator (collectively referred to as "Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's installation instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date upon which a septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required for the septic system by applicable law, the one (1) year warranty period will begin upon the date that installation of the septic system commences. In order to exercise its warranty rights, Holder must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for those Units determined by Infiltrator to be defective and covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.
- (b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
- (c) This Limited Warranty shall be void if any part of the ATL System components is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

- (d) No representative of Infiltrator has the authority to change this Limited Warranty in any manner whatsoever, or to extend this Limited Warranty. No warranty applies to any party other than the original Holder.

* * * * *

The above represents the standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's corporate headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.



P.O. Box 768 • Old Saybrook, CT 06475
800-221-4436