
**DESIGN SPECIFICS FOR 7555 ADDLER - REPLACEMENT 3BR/C
(SPRINGFIELD TOWNSHIP – LUCAS COUNTY)**

1. STS Rules 3701-29 of the OAC shall be followed. Contact #811 prior to installation.
2. LHD, septic installer and/or designer must discuss any questions, changes or concerns prior to/during the installation of the system as needed.
3. Run a **new section of SDR 35** as needed, from the house to the existing septic tank. Line must be installed with $1/8'' - 1/4''$ of fall per foot. Install an exterior clean-out (slide on style cover is recommended, not threaded). Bed the line in the firmly packed in-situ soil (except for the section of line next to the foundation which can be bedded in stone to prevent settling). Install state approved inlet & outlet risers that are flush with grade on the existing tank. Install baffles in the tank as needed (4'' to 6'' inlet tee & a 4'' OR 6'' outlet tee with an 18'' drop down and with an effluent filter as required). Check to assure a minimum flow-line through the tank of at least two inches (2''). [NOTE: If tank is in poor condition, it must be replaced with a new state approved 1500-gallon septic tank and the existing tank must be properly abandoned].
4. Run 4'' **SDR 35** from the new tank to a new distribution box. Attempt to maintain at least $1/2''$ of fall per 10' of run length. **Distribution box** must handle the system design as shown (minimum of 3 outlets and 1 inlet line from tank). A cap or elbow is required to allow one "set of runs" (72') to "rest". Lines will exit the distribution box and feed each "run" independently. The lines exiting the distribution box must be solid **SDR 35**, must be at the same elevation, and must be properly bedded in the in-situ soil (not stone).
5. System design based on utilizing the **Infiltrator 36 Low Profile Chambers**. Trench width of 36''. Install three (3) sets of runs with a total length of 72' per leaching trench design calculations with a 25% reduction being given as permitted for a replacement system. [Per 3701-29-15 Appendix A III (A) (2)] due to site restrictions. Place chambers four (4) feet between the leaching trenches walls [permitted per 34701-29-15 Appendix A III (E)]. [NOTE: Due to restricted site limitations (lot size, location of existing leach bed, large trees, location of water line etc.) the 72' runs will be split into two (2) sets of 36' runs as shown via a manifold. A variance will be needed from the local health department since trenches cannot be installed at the required length along contour of 72' although the required lineal and square footage will be maintained].
6. Maintain a minimum of 10' from the newly proposed HSTS & the house, property lines, easements, road right of way, all hardscapes (patio, sidewalks, etc.) and the **city water line**.
7. **Bench Mark** is the red dot on the southwest corner of the patio. The location of the **Test Hole (initial/final grade)** is 19'' below the benchmark. Grades in the replacement area vary however the required 6'' VSD will be maintained from the specified PSWT and 18'' (+) from the specified restrictive layer along the entire length of contour. **Initial and final trench depth** will be (+/-) 29''. **Bottom of trench** – 48'' below the bench mark. **Top of chambers** – 40'' below the bench mark.
8. Plant grass ASAP after system is backfilled.

Address	7555 addler		Twp	Springfield		
New	Replacement	Alteration	Single	Multi	SFOTS	Other
	x		x			
Site Visit Date		5/2/2024				
Prop Lines		Wells	Structures			
Wetlands		Flood	Drainage			
Utilities						
Isolation Distances Met?						
y						

Test Hole Locations Designated		y	Design Septic Tank Size		1500
North Arrow	y		Manufacturer		ODH approved
System Type	cham		tbd		y
Number of Bedrooms	3				
Bench Mark Location					
patio					

Pretreatment

Pretreatment Type			
Make		Rated gpd	
Model		ODH Approved	

Lift/Dosing Station

Station Tank Size		ODH approved	
Manufaturer			
Demand or Timed Dose	0	Pump Height	
Timed Dose only	0	Adequate?	
Pump Nake/Model			
Gallons Per Dose			

Engineered Drainage

Perched water table lowered to (in)		Sampling Port	
Soil Type			
Trench Spacing		Interceptor Required?	
Trench Depth			

Trench Depth

Required VSD	Final Field Ht from BM	Limiting Condition	Depth to Limiting Conditon
6	19" blow	perch	35
Trenth Depth Calculated			Depth of Trench
2-	29		29
Straw Required(S&P)	Stone Above Pipe (2")	Stone around Pipe (4")	Stone Below Pipe (2")
na			
Cover Type/Amount ok?		Fill Amount/Type ok?	

Leach Field Size

Daily Design Flow: # of bedrooms	3	Gal Per Day (240 Min)	360
Soil Type Class	S	Soil Grade	sg
Calc Daily Design Flow SILR	450	SILR	0.8
# of Inspection Ports	y	25% Redux for Chambers	337.5
Trench Width (ft)	3	25% Add area for NON Chambers	562.5
Design Length (ft)	72	Calc Active	Calc Total
# of Act Trench	2	450	562.5
# of Total Trench	3	Design Active	Design Total
Trench Spacing	4 w/w	432	648
		25% Add area for Chambers	422

Trench Length

Most Restrictive Soil Type	S	Grade	sg	Slope %	3%
Infiltrative Distance	6	HLLR	4		
Calc Daily Design Flow HLLR		Replacement (Less 20%)		Existing Lot (Less 10%)	
90		72		81	
Calc Length Min (ft)		Design Length			
72		72			

Trenches Active	2	Total Trenches	3	Length	72
Trench Width	3			Depth 2-	29

Replacement Designated?	na
Sew Pipe Specs in Design?	y
Variance Required?	na

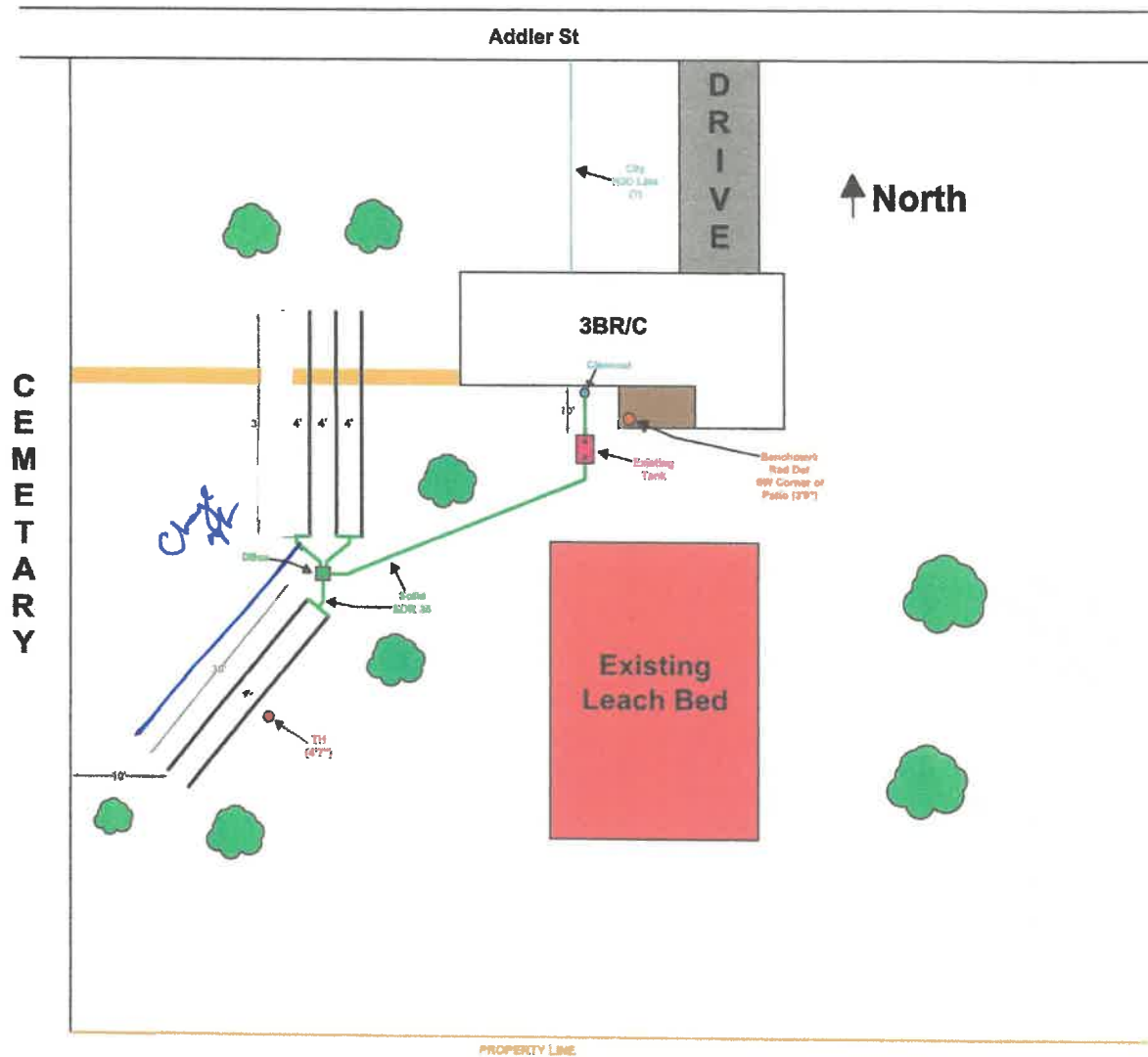
Replacement adequate size?	na
O&M Instructions Included?	y

Sign _____

Date _____

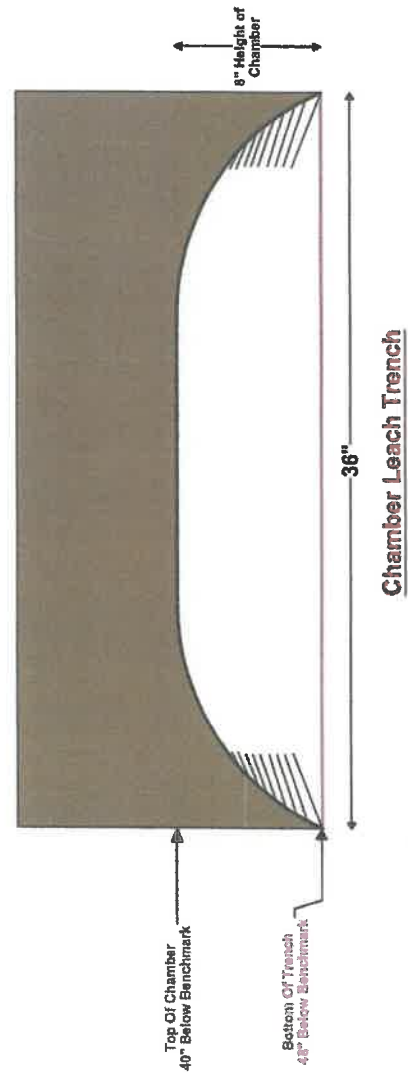
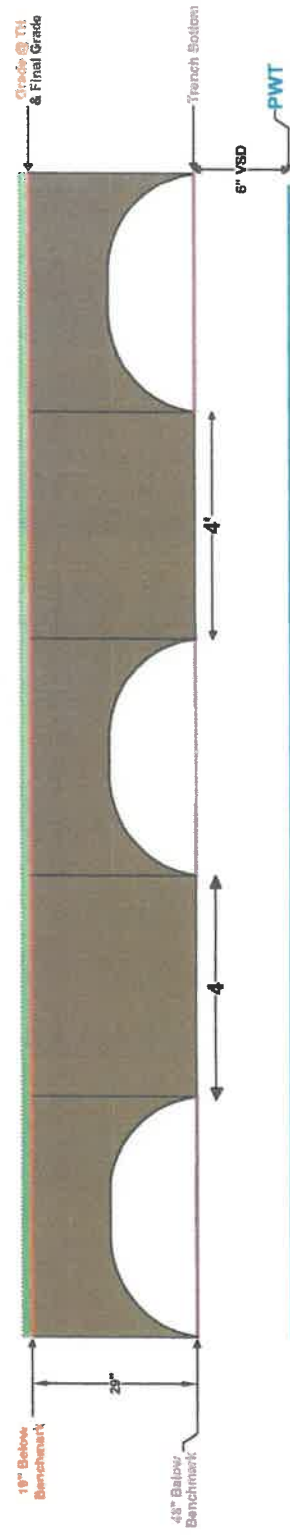
Septic Design Proposal

7555 Addler St (Springfield Twp)



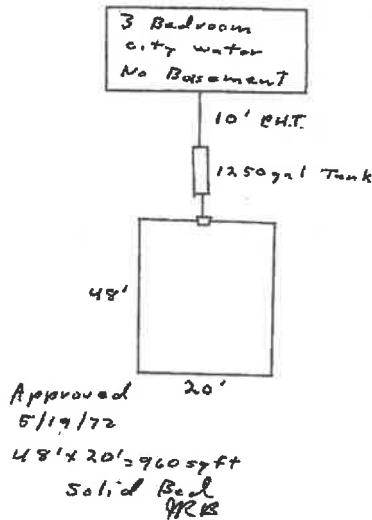
Leach Field - Trench Detail

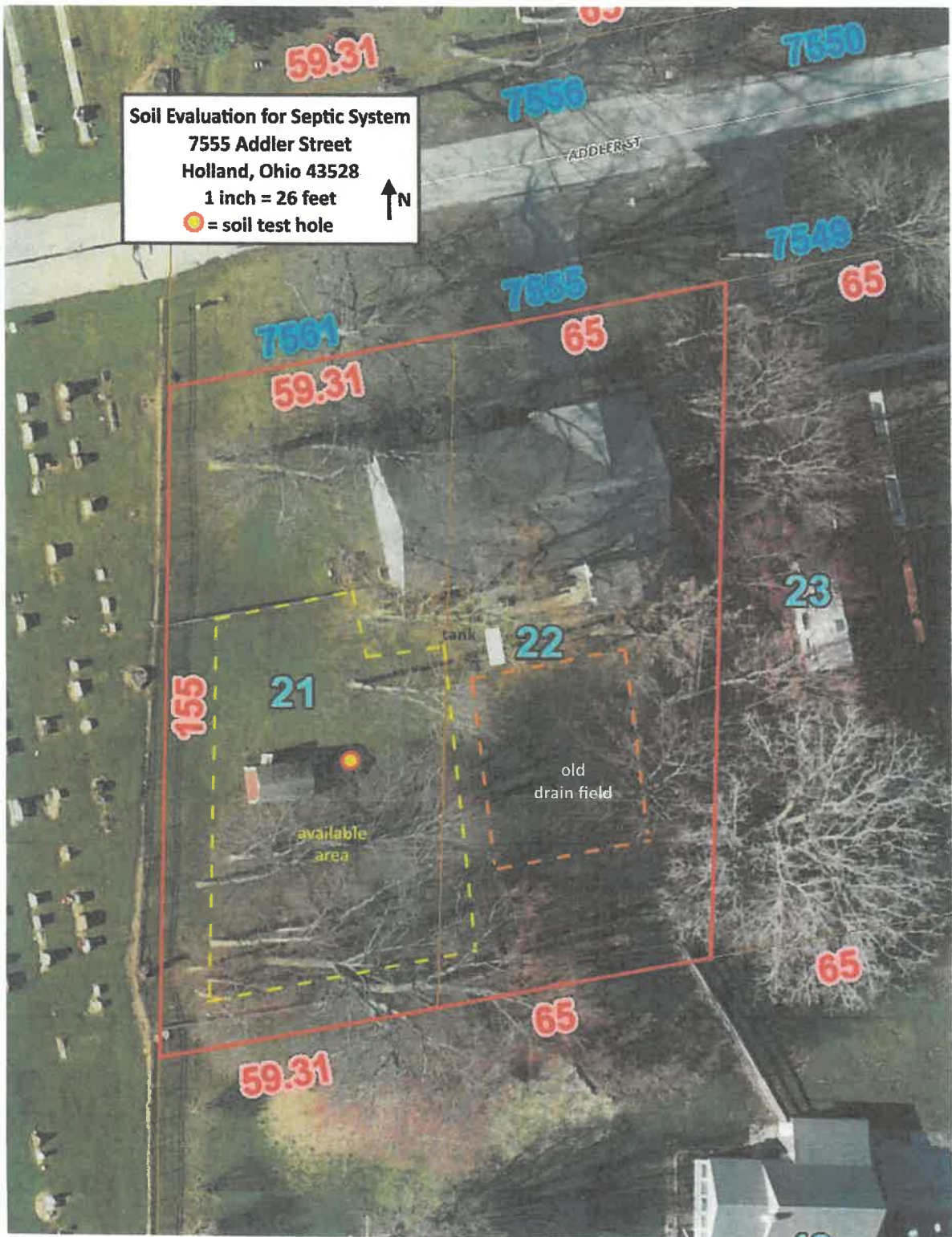
7555 Addler St (Springfield Twp)



TOWNSHIP: Springfield LOT NO. 21 + 22
VILLAGE: _____ SECTION: _____
SUB-DIVISION: Iforde Health Farm
OWNER: Starling Corp ADDRESS: 7555 Addeley
BUSINESS: _____
WATER SUPPLY: Well ☐ City ☒
SEWAGE DISPOSAL UNIT: Septic Tank Size: 1250 gallon
SECONDARY TREATMENT: Tile Disposal Field: 48 ft x 20 ft =
Sub-Surface Filter: 960 sq ft Solid Bed.
Other: _____
REMARKS:
Contractor: Commercial EX.
Size of Lot: 12,350 sq ft
Permit No.: A 72
65-48881 Date of Inspection: 5/19/72 JRB

7555 Addeley





3 bed, city water

Site and Soil Evaluation for Sewage Treatment and Disposal

County: Iowa
 Township: Springfield
 Property Address Location: 7555 A.D. Dr. St.
Holland OH 43528
 Applicant Name: Deborah Dunkel
 Address: (same)
 Phone: _____
 Lot #: _____
 Test Hole #: 216141-83.72268
 Latitude Longitude: _____
 Method: Ph X Auger Probe

Land Use: residential
 Vegetation: grass
 Landform: valley
 Position on Landform: W. Slope
 Percent Slope: 2-3
 Slope of Slope: convex
 Date: 12/15/23
 Evaluator: Richard Schaff
9455 Neumann Cir.
Ypsilanti, MI 48197
 Signature: _____
 Phone: (734) 255-4546



Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability				Other Soil Features		
Horizon	Depth (inches)	Munsell Color (hue, value, chroma)		Redoximorphic Features		Texture	Approx. % Clay	Approx. % Fragments	Structure		Consistence	
		Matrix Color	Concentrations	Depletions	Class				Grade	Size		Type (shape)
	0-10	10YR 2/2	-	-	S	0	0	0	0/SG	-	-	loose
	10-19	10YR 4/4	-	-	S	0	0	0		-	-	
	19-27	10YR 5/6	-	-	S	0	0	0		-	-	
	27-35	10YR 5/4	10YR 5/6	-	S	0	0	0		-	-	
	35-48	10YR 5/4	10YR 5/6	10YR 5/2	S	0	0	0		-	-	
	48-51	10YR 5/2	10YR 4/6	10YR 5/1	S/C	40	0	0		f	PL	fr.

Limiting Conditions	Depth to (in.)	Descriptive Notes	Remarks / Risk Factors
Perched Seasonal Water Table	33		
Apparent Water Table	41.2		
Highly Permeable Material	40-48		
Bedrock	55		
Restrictive Layer	48	Platy structured clay	Maintain required separation dist.

Note: The evaluation should include a complete site plan or site drawing.

Leaching Trench Design Calculations FOR REPLACEMENT LEACH FIELD

Information from soil evaluation	
Hydraulic Linear Loading Rate (inches)	4
Soil Infiltration Loading Rate (inches)	0.6
Number of Bedrooms	3
Depth to PWT (inches)	35
Width of Trenches (inches)	36
Depth to Restriction Layer (inches)	48

Property Information	
Builder	JANKOWSKI
Address	7550 AUDLER
Township	SPRINGFIELD
Zone	Replacement

Overview of System Requirements	
Number of Trenches	3
Length of Trenches (feet)	90
Width of Trenches (feet)	3
Total Linear Feet	270
Width Between Trenches (in inches)	7
Existing Drainage	UNKNOWN

Daily Design Flow	
(120 gpd) X (Number of Bedrooms)	360 gpd
120 gpd	
3 Bedrooms	
Minimum Length of Leach Lines	
Daily Design Flow / Hydraulic Linear Loading Rate	90 ft
360 / 4	
Minimum Length of Leach Lines based to meet whole number	90 ft
Total Length of Leach Lines	
Minimum Absorption Area / Width of the Trench	562.5 ft
562.5 / 3	
Total Length	
Length / Trench Length	2.08333333
Round Number of trenches to meet whole number	3 Trenches
Minimum Absorption Area Width	
Min. Absorption Area Length	6.25 ft
562.5 / 90	

Minimum Absorption Area	
Daily Design Flow / Soil Infiltration Loading Rate	450 ft ²
360 / 0.8	
Additional Area Required for 25% Resting	
Minimum Absorption Area X 0.25	112.5 ft ²
450 X 0.25	
Total Absorption Area	
Minimum Absorption Area + 25% Resting	562.5 ft ²
450 + 112.5	
Number of Trenches to Maintain Total Absorption Area	
Trench Length X Trench Width = Absorption Area Per Trench	
90 X 3 = 270 ft ²	
Min. Absorption Area / Absorption Area Per Trench	1.66666667 Trenches
450 / 270	
Adjust 25% absorption area for resting / absorption area per trench	2 Trenches to use at all times
112.5 / 270	
	1 Trench(es) to rest at all times

** CHAMBERS ONLY ** with * 25% Reduction *	
Number of Trenches to Maintain Total Absorption Area	
Minimum Absorption Area * 25% = Reduction for Chamber System	112.5 ft ²
450 * 0.25 =	
Minimum Absorption Area - 25% Reduction = New Min. Absorption Area for Chamber System	397.5 ft ²
450 - 112.5 =	
Additional Area Required for 25% Resting	
Minimum Absorption Area X 0.25	84.375 ft ²
397.5 X 0.25 =	
Total Absorption Area + 25% Resting	421.875 ft ²
397.5 + 84.375 =	
Min. Absorption Area / Absorption Area Per Trench	1.25 Trenches
397.5 / 270 =	
Adjust 25% absorption area for resting / absorption area per trench	2 Trenches to use at all times
84.375 / 270	
	1 Trench(es) to rest at all times

If Replacement System:	
Up to 20% can be cut in the length of the leach lines. BUT... the Total surface area must be maintained.	
Total Surface Area =	562.5 ft ²
Original Calculated Length =	90 ft
20% of Original Calculated Length =	18 ft
Reduced Length =	72 ft
Trench Length X Trench Width = Absorption Area Per Trench	
72 X 3 = 216 ft ²	
Min. Required Absorption Area / Absorption Area Per Trench = Number of Trenches to use at all times	2.60333333 Trenches
450 / 216 =	
Adjust 25% absorption area for resting / absorption area per trench = Number of trenches to rest	3 Trenches to use at all times
112.5 / 216 =	
	1 Trench(es) to rest at all times

REPLACEMENT System Overview	
Number of Trenches	4
Length of Trenches	72
Width of Trenches (feet)	3
Total Linear Feet	288
Width Between Trenches (in inches)	3
Drainage	N/A

** CHAMBERS ONLY ** (Replacement)	
Up to 20% can be cut in the length of the leach lines. BUT... the Total surface area must be maintained!	
Chamber Total Surface Area =	337.5 ft ²
Original Calculated Length =	90 ft
20% of Original Calculated Length =	18 ft
Reduced Length =	72 ft
Trench Length X Trench Width = Absorption Area Per Trench	
72 X 3 = 216 ft ²	
Min. Required Absorption Area / Absorption Area Per Trench = Number of Trenches to use at all times	1.5625 Trenches
337.5 / 216 =	
Adjust 25% absorption area for resting / absorption area per trench = Number of trenches to rest	2 Trenches to use at all times
84.375 / 216 =	
	1 Trench(es) to rest at all times

General Operation & Maintenance Procedures For Your New Septic System

Maintaining Your Septic System:

1. Maintenance of a septic system can save a lot of money and significantly prolong the life of the system.
2. Sound septic system operation and maintenance practices include:
 - Conserving water
 - Being careful that nothing harmful is disposed through the system
 - Annual inspections on the system
 - Pumping of the septic tank as needed depending on the size of the tank and the number of people in the home (see attached chart).

Pumping your septic tank is probably the single most important thing you can do to protect your system. If the buildup of solids in the tank becomes too high and solids move from the tank to the drain field (leach field), this could clog and strain the system to the point where a new system will need to be installed. Contact a company that is licensed and bonded by the Ohio Department of Health and is registered by the local health department. A list of registered septic haulers (pumpers) can be obtained from the health department.

4. Alternate your leaching trenches as required. All of the septic systems that utilize a standard leach field for treatment that were installed after 2015 require that 25% of the system "rest" for a period of up to one (1) year. An elbow, cap, speed leveler and/or cap with a handle will enable you to perform this task manually. Your local health department can assist you with further explanation of this procedure as needed.

Use Water Wisely:

1. Water conservation is very important for septic systems because continual saturation of the soils in the drain (leach) field can affect the quality of the soil and its ability to remove parasites, bacteria, viruses, and other pollutants naturally from the wastewater. The most effective way to conserve water around the house is to take stock of how it is going to waste. Immediately repair any leaking faucets or running toilets, and use washing machines and dishwashers only when full.
2. Additional ways to conserve water are the following:
 - Avoid letting water run while washing hands and brushing teeth.
 - Avoid taking long showers and install water-saving features in faucets and showers heads. These devices can reduce water use up to 50 percent. Low flush toilets use one to two gallons per flush compared to three to five gallons used by conventional toilets. Using a toilet dam or putting a container filled with rocks in the toilet tank can reduce water use by 25 percent.
 - Avoid overtaxing your system by using a lot of water in a short period of time. For example, space out activities requiring heavy water use (like laundry) over several days.
 - Divert roof drains, surface water drains, sump pumps and water softener discharge away from the drain field.

Know What Not to Flush:

1. What you put in your septic system greatly affects its ability to do its job. As a general rule of thumb, do not dispose of anything in your septic system that you can easily put in the trash. Your system is not a garbage disposal! When excess materials go down the drain, solids build up in the septic tank and need pumped out.
2. The **"DO NOT FLUSH ITEMS"** INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
 - Food scraps
 - Coffee grounds
 - Grease and cooking oils
 - Plastics

- Paper towels and wipes of any kind (baby, feminine hygiene, disinfecting etc.)
 - Feminine hygiene products (tampons, sanitary napkins etc.)
 - Cigarette Butts
 - Disposable diapers
 - Condoms
 - Contraceptives
 - Kitty litter
3. Garbage disposals are not recommended and can increase the amount of solids up to 50% in a septic tank. Most of what goes into a disposal (vegetable/fruit rinds/peelings, fat, bones etc.) is non biodegradable material which does not break down.

Avoid Hazardous Chemicals:

To avoid disrupting or permanently damaging your septic system, do not use dispose the following hazardous household chemicals:

- Paints
- Varnishes
- Thinners
- Waste oil
- Photographic solutions
- Pesticides
- Prescription medications

These items can destroy helpful bacteria and the biological digestion-taking place within your system and can even cause pollution of the groundwater.

Protect Your System:

It is important to protect your system from potential damage:

- Do not plant anything but grass over or near your septic system. Roots from some shrubs and trees can cause damage by plugging or even rupturing the drainage pipe.
- Do not allow anyone to drive or operate heavy machinery over any part of the system.
- Never build a structure or any addition over or install an aboveground swimming pool over the septic tank or leach field.

Estimated Septic Tank Pumping Frequencies in Years										
Tank Size (Gals)	Household Size (number of people)									
	1	2	3	4	5	6	7	8	9	10
500	5.8	2.6	1.3	1.0	0.7	0.4	0.3	0.2	0.1	—
750	9.1	4.2	2.6	1.8	1.3	1.0	0.7	0.6	0.4	0.3
900	11.0	5.2	3.3	2.3	1.7	1.3	1.0	0.8	0.7	0.5
1000	12.4	5.9	3.7	2.6	2.0	1.3	1.2	1.0	0.8	0.7
1250	15.6	7.5	4.8	3.4	2.6	2.0	1.7	1.4	1.2	1.0
1500	18.9	9.1	5.9	4.2	3.3	2.6	2.1	1.8	1.5	1.3
1750	22.1	10.7	6.9	5.0	3.9	3.1	2.6	2.2	1.9	1.6
2000	25.4	12.4	8.0	5.9	4.5	3.7	3.1	2.6	2.2	2.0
2250	28.6	14.0	9.1	6.7	5.2	4.2	3.5	3.0	2.6	2.3
2500	31.9	15.6	10.2	7.5	5.9	4.8	4.0	4.0	3.0	2.6



Sheila R. D'Aguanno R.S.
Registered Sanitarian
(419)-461-4329

Sheila's Septic Design LLC



Over 30 Years of Serving Our Community

nashs2105@gmail.com

[Home](#) [Products](#) [Chambers](#) [Arc Series](#)

Arc 36 Low Profile Chamber



The Arc 36 Low Profile (LP) septic leaching chamber is a sturdy, lightweight plastic unit that combines maximized infiltrative surface area and storage capacity with an improved structural design to accommodate most conventional leachfield system challenges without sacrificing performance.

[Find a Distributor](#) [Contact an Expert](#) [Manuals, Guides & CAD Details](#)

Specifications:

Size

34"W x 63"L x 8"H
(864 mm x 1600 mm x 200 mm)

<https://www.infiltratorwater.com/products/chambers/arc-series/arc-36-low-profile/>

Leave a message

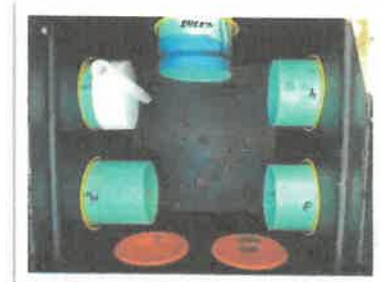




Poly Lock Distribution Box (Recommended)



Distribution Box with "Elbow" Style Divertor



Distribution Box with "Cap with Handle"

[NOTE: Four (4) runs shown. System design will only require three (3) outlets]



4" & 6" (Recommended) Effluent Outlet Filters