SECTION 39

SUBSURFACE DRIP DISPOSAL SYSTEMS

A Subsurface Drip Disposal (SDD or Drip) System is a subsurface sewage disposal system, which utilizes pressurized drip irrigation line for the uniform application of treated wastewater throughout the disposal field. SDD systems shall be designed and installed to utilize the upper profiles of a suitable soils area through the uniform distribution of effluent, dosing and resting cycles, and shallow installation of the disposal line. SDD systems are to be preceded by an advanced treatment system (ATS) device capable of achieving secondary effluent treatment standards.

A. Site and Soil Requirements for Drip Systems

Prior to the design of the Drip system, the suitability of the site must be demonstrated through acceptable soil properties, soil conditions and topographical characteristics.

1. The design and installation of the Drip system shall be based on the most restrictive naturally occurring soil horizon to a depth of twenty (20) inches or twelve (12) inches below the installation depth of the drip line, whichever is greater.

2. An area of suitable soil must be available to install the primary system and maintain a suitable area of adequate size for a one hundred (100) percent duplicate area (*i.e.*, secondary area).

3. An Extra-High Intensity soil map, provided by a licensed professional soil scientist (LPSS), who is also certified by TDEC-WR as an approved soil consultant and listed by the Department, shall be required for the design of a SDD system.

   (a) With regard to soil properties, site-specific profile descriptions establishing the texture and structure (*i.e.*, grade and shape) shall be required for each mapped soil unit considered for SDD system use.

   (b) Profile descriptions will require excavation of soil pits in order to generate site-specific pedon descriptions. Said pedon descriptions will determine soil suitability for Drip system use.

      (1) Each soil pit evaluation shall be conducted by the LPSS responsible for the Extra-High Intensity soil map and shall be done in consultation with and under the direct on-site supervision of a Department staff soil scientist. The Department staff soil scientist shall monitor the soil pedon evaluation/description of each pit to ensure accuracy.

      (2) The soil profile shall be described to a depth of thirty-six (36) inches or to rock or fragipan, whichever is shallower.

      (3) There shall be a minimum of two (2) pits per acre, with at least one pit in any soil unit intended for potential use, unless a different frequency is specified by the Department.

      (4) Prior to excavation, the exact location of each individual soil pit shall be agreed upon by both the private licensed professional soil scientist and the Department staff soil scientist.

      (5) The size, orientation and accessibility of each individual soil pit and its methodology of excavation shall be in accordance with the directives of the Department staff soil scientist and done in such a manner so as to be stable, safe and minimize disturbance of the site. The size of the soil pit shall be three (3) feet wide, three (3) feet deep and a maximum of five (5) feet long for personnel accessibility.

      (6) Once the soil pit evaluation is completed to the satisfaction of the Department, the pit shall be carefully backfilled with the excavated spoil material in consultation with the Department staff soil scientist and in such a manner so as to minimize disturbance of the site.

      (7) The private LPSS shall accurately plot the location of each soil pit on a copy of the approved soil map and shall label each pit appropriately.

      (8) The soil pedon descriptions of each pit shall be logged on to the appropriate form provided by the Department. A separate form shall be used for each soil pit, shall be filled out in its entirety and shall be submitted to the Department for review and approval.

      (9) The Department staff soil scientist shall review each individual pit profile description form for completeness and accuracy. If found satisfactory, each individual form shall be denoted as approved by the Department staff soil scientist. If found unsatisfactory, for any reason, each individual form shall be

denoted as disapproved by the Department staff soil scientist and returned to the private licensed professional soil scientist for correction and re-submittal.

(10) The Department staff soil scientist shall evaluate and interpret the soil pedon data documented on each individual pit profile description form and then assign a corresponding hydraulic loading rate for that associated soil unit in accordance with *Table S39-2* or denote that the soil unit does not qualify for Drip system use. The responsible LPSS shall not assign the corresponding hydraulic loading rate on the pit profile description form.

(11) Soil pit profile description forms shall not be used for system design purposes unless they have been approved by the Department.

(12) Soil pit profile description forms shall have an expiration date effective three (3) years from their approval date. Forms with mature expiration dates shall be considered null and void. For any site or property affected by expired soil pit profile description forms, the original information may be re-assessed and re-approved, if possible; and, if not, new higher intensity soil mapping (*i.e.*, Ultra-High Intensity) may be required and new soil pit profile description evaluations shall be conducted and submitted to the Department for review and approval. All new soil pit profile description evaluations shall be done in accordance with these *Regulations*.

(c) Slope classes for extra-high intensity soil maps used for Drip systems shall be delineated as follows in *Table S39-1*:

Table S39-1

Slope Classes for Drip Systems
0-9%
10-20%
20-30%
30-35%
>35%

(d) Percolation tests shall not be allowed to determine soil suitability for Drip system use.

(e) The presence of chroma 2 (or less) redoximorphic depletions due to wetness shall indicate a restrictive horizon (regardless of abundance). Soils with horizons containing chroma 2 (or less) redoximorphic depletions due to wetness that are less than 24 inches from the surface shall not be considered suitable for drip dispersal in Williamson County.

(f) If soils being considered for Drip system use exhibit redoximorphic depletions due to wetness between 24-30 inches in depth, it may be required to adjust the associated hydraulic loading rate (listed below in *Table S39-2*) downward accordingly (*i.e.*, said soil should not be hydraulically loaded at the same rate as a similar soil with no redoximorphic depletions due to wetness between 24-36 inches). This determination shall be made upon consultation with and agreement between Department staff soil scientist(s) and the LPSS of record. There shall be a consensus between both parties regarding the necessity of any adjustment and the amount of any adjustment. The Department Director shall have the authority to make a final decision regarding any matters of dispute on this issue between the soil scientists.

4. Acceptable soil textural and structural properties are shown in *Table S39-2*

Table S39-2. Hydraulic Loading Rates (gpd/ft^2) – For Subsurface Drip Disposal (SDD) Systems

Texture	Structure		Hydraulic Loading Rate (gpd/ft^2) $BOD_5 \leq 30$ mg/L
	Shape	Grade	
Coarse Sand, Loamy Coarse Sand	NA	NA	Not Used
Sand	NA	NA	Not Used
Loamy Sand, Fine Sand, Loamy Fine Sand,	Single Grain	Moderate, Strong	0.50

Very Fine Sand, Loamy Very Fine Sand		Massive, Weak	0.40
Coarse Sandy Loam, Sandy Loam	Massive	Structureless	0.30
	Platy	Weak	0.20
		Moderate, Strong	Not Used
	Blocky, Granular	Weak	0.40
		Moderate, Strong	0.50
Loam	Massive	Structureless	0.20
	Platy	Weak, Moderate, Strong	Not Used
	Blocky, Granular	Weak	0.30
		Moderate, Strong	0.40
Silt Loam	Massive	Structureless	0.20
	Platy	Weak, Moderate, Strong	Not Used
	Blocky, Granular	Weak	0.20
		Moderate, Strong	0.30
Sandy Clay Loam, Clay Loam, Silty Clay Loam	Massive	Structureless	Not Used
	Platy	Weak, Moderate, Strong	Not Used
	Blocky, Granular	Weak	0.20
		Moderate, Strong	0.20
Sandy Clay, Clay, Silty Clay	Massive	Structureless	Not Used
	Platy	Weak, Moderate, Strong	Not Used
	Blocky, Granular	Weak	0.075
		Moderate, Strong	0.10

NOTE: Table S39-2 is from *TDEC-WR Rule 0400-48-01-.15 Table VII*, which was compiled from: EPA, Netafilm, GeoFlow, AL, NC, MS, GA, TX, AR and TN.

5. The size of the SDD system shall be determined by the following:

   (a) The projected daily wastewater flow rate divided by the loading rate shown in *Table S39-2* shall determine the area (ft^2) required for the individual Drip system.

   (b) When slopes exceed nine (9) percent, slope correction factors (shown in *Table S39-3*) shall be used to adjust area requirements.

Table S39-3.
Slope Correction Factors for Drip Systems

Slope Class	Depth to Restrictive Layer	
	< 24 in	≥ 24 in
≤9%	0%	0%
10 % - 20 %	15%	0%
20 % - 30 %	35%	15%
30 % - 35 %	50%	35%

**NOTE: For slope correction factor determination, the slope class of 10%-20% noted above in Table S39-3, shall include slopes >9% up to 20%. Similarly, the slope class of 20%-30% shall include slopes >20% up to 30%; and, the slope class of 30%-35% shall include slopes >30% up to 35%.*

   (c) Slopes of more than thirty-five (35) percent shall be considered unsuitable for Drip systems in Williamson County.

(d) For sites with slopes greater than twenty-five (25) percent, and up to thirty-five (35) percent, a special investigation shall be conducted to evaluate those soils to determine: depth to rock, kind of rock and particle size class designation to a depth of six (6) feet or to hard rock, whichever is shallower.

(e) For all Drip system sites, regardless of slope percentage, a topographical analysis from a registered land surveyor shall be required.

(f) For all sites with slopes greater than twenty-five (25) percent, and up to thirty-five (35) percent, the following requirements shall be met:

(1) A geotechnical engineer shall evaluate the site, identify the location, character, and extent of any slippage soil areas present (as outlined in the provisions of *Article 13* of the *Williamson County Zoning Ordinance*), and prepare a report outlining any special design recommendations for proper drainage and construction of the Drip system to ensure slope stability.

(2) The alternative system design plans required in accordance with *Subsection D of this Section* (prepared by an engineer licensed in the State of Tennessee, with experience designing on-site wastewater systems) shall also be prepared in consultation with the geotechnical engineer and shall be in compliance with the geotechnical report.

(3) The Department shall require that both the Drip system engineer of record and the geotechnical engineer provide on-site construction supervision and/or inspection of the system installation.

Said engineers shall also provide written documentation to the Department outlining their observations, findings and/or recommendations, along with stamped/sealed as-built drawings certifying the successful installation of the system in conformance with the approved design plans and geotechnical report.

(g) Where there exists the inclusion of two (2) or more dissimilar soil map units (*i.e.*, soil units with different hydraulic loadings rates as listed in *Table S39-2* or with different slope classifications as listed in *Table S39-1*) within a proposed Drip disposal field area, the conditions for the use of the soil unit having the most restrictive characteristics (*e.g.*, lower hydraulic loading rate or soil unit laying upon a steeper slope class, etc.) shall take precedence in the design, designation and subsequent use of that Drip disposal field area.

(h) A proposed Drip disposal field area shall be a single contiguous area.

Multiple non-contiguous areas, however, may be allowed so long as each individual area (ft^2) is sized equivalent to each other individual area (ft^2) and so long as the summation of each individual area (ft^2) equals the overall total area (ft^2) requirement of the Drip system. As outlined in *Subpart (g)* above, the most restrictive soil unit characteristics of the individual proposed areas shall govern the overall Drip system design. Prior to approval of multiple non-contiguous areas, it must be demonstrated by the design engineer that the Drip system can be zoned with balanced tubing footage as required below in *Subsection B, Part 16*. The use of multiple non-contiguous Drip field areas shall be considered by the Department on an individual, case-by-case basis.

B. Design and Layout Specifications of Drip Systems

1. The required minimum linear tubing footage is determined by dividing the amount of required square footage of suitable soil area by two (2).

(a) However when slope correction factors are required, the minimum linear tubing footage is calculated on the required square footage (without the addition of the slope correction factors) divided by two (2).

(b) The approximate tubing spacing is then determined by dividing the required square footage (including the slope correction factor) by the minimum linear tubing footage.

(c) Complete coverage of the required square footage (including any slope correction factor) is required. With prior approval from the Department, engineers are permitted to specify a closer tubing spacing and additional tubing, as soil and site conditions may accommodate to insure complete coverage of the disposal area.

2. The drip disposal lines shall be placed on contour (*i.e.*, follow the natural, existing ground surface contours of the designated sewage disposal system area). The maximum length of a single line or maximum drip zone size shall be in compliance with the manufacturer's recommendations and is subject to approval by the Department.

3. Drip disposal lines and drip emitters shall be spaced on twenty-four (24) inch centers unless an alternative spacing is required by the use of slope correction factors. Tubing spacing other than twenty-four (24) inch centers may be considered by the Department on a case-by-case basis.

4. All components of a Drip system shall be designed and manufactured to resist the corrosive effects of wastewater and household chemicals, and meet applicable ASTM standards.

5. All Drip systems shall include an automatic filtration system capable of removing suspended solids to a level recommended by the drip disposal line manufacturer or to a maximum particle size of no more than 120 microns, whichever is smaller. The filtration system shall be sized to provide the specified filtration level at or above peak flow conditions.

6. All Drip systems shall be designed to automatically flush each disposal field or zone at a minimum fluid velocity of two (2) feet per second (fps).

   (a) Flushing velocity is measured at the distal end of the drip disposal line.

   (b) Flushing frequency shall be at least the minimum frequency recommended by the drip disposal line manufacturer or at a minimum once every thirty (30) days.

7. The filter flush, and network forward flushing volumes are to be hydraulically acceptable to and not adversely affect the ATS treatment unit design for systems that flush to the pre-treatment tank (*i.e.*, septic tank).

   Systems designed to continuously forward flush to the dosing tank (*i.e.*, pump tank) shall incorporate a system to automatically flush the filter to the pre-treatment tank (*i.e.*, septic tank).

   All Drip system designs shall incorporate a means to minimize or eliminate any agitation of either the septic tank effluent or pump tank effluent caused by these return flushing flows.

8. Air / vacuum relief valves shall be placed at the highest point of each zone; on both the supply and return manifold lines, or as otherwise specified by the Drip manufacturer. All valves shall be installed under a protective cover (*i.e.*, valve box) allowing grade level (*i.e.*, ground level) access.

9. Non-pressure-compensating turbulent flow drip emitters shall not be used in any SDD system.

10. Valves or appropriate fittings (*e.g.*, Schrader valves) to allow for easy measurement of system pressures shall be provided on the pump output, the inlet and outlet of filters, and on each supply and return manifold of each zone.

11. SDD systems shall be timed dosed at regular intervals.

    (a) Demand dosing shall not be used.

    (b) Minimum dose calculations shall include at least three (3) times the volume of the tubing plus the volume of the supply and return manifolds.

    (c) All Drip systems shall incorporate a flow meter to accurately determine the volume of flow to the disposal field.

    (d) The approved Drip system shall also provide the means to calculate pump cycles, alarm events, pump run time, and automated flushing events.

12. Drip systems designed to continuously forward flush shall incorporate a flow meter on the supply and return in order to accurately determine the volume of flow dosed in the disposal field.

13. SDD systems shall have a pump tank capacity that will allow float placement to provide for a minimum working volume of one hundred (100) percent of the peak design flow.

    (a) This volume should be calculated from the timer enable to the high water alarm floats.

    (b) The pump tank shall also provide a reserve capacity of at least one hundred (100) percent of the peak daily flow above the high water alarm.

    (c) The alarm and alarm switches shall be placed on a separate electrical circuit from the pump power line.

14. SDD systems shall be designed to prevent the redistribution of effluent by gravity in the disposal area.

15. SDD systems shall be designed such that all lateral lengths of drip tubing are roughly equal (*i.e.*, as close to the same length as possible).

16. SDD systems containing multiple zones shall balance the footage in the zones as close as possible in order to equalize the flows for both dosing and flushing.

17. All valves (*e.g.*, air / vacuum relief valves, zone valves, solenoid valves, check valves, etc.), flow meters, headworks and other miscellaneous components shall be installed under a protective cover (*i.e.*, valve box) allowing grade level (*i.e.*, ground level) access.

18. The pump selection shall be sized to meet or exceed the minimum flow and total dynamic head (TDH) requirements of the system. The pumping requirements for each system shall be checked against the performance curve of the pump to be used to ensure compatibility.

19. The use of a soil drainage improvement practice, as specified by the Department, shall be required on all sites utilizing SDD systems, unless it is determined by a licensed soil scientist (either Department staff soil scientist or private licensed soil scientist) that said Drip system will not be adversely impacted by surface or subsurface waters due to the specific soil and site (*i.e.*, landscape position, topography, etc.) conditions present on the property. Said determination shall be justified in writing on an individual, case-by-case basis.

20. In addition to the provisions outlined herein this *Section 39*, all Drip systems shall be designed in accordance with the Drip manufacturer's specifications, guidelines, recommendations and requirements.

C. Construction Specifications for Drip Systems

1. All SDD systems, and their related components, shall be installed in accordance with the setbacks, buffer zones and minimum distance boundaries as set forth in *Section 13*.

2. The piping connections between the structure and the septic tank, regarding the utilization and placement of cleanouts and the minimum pipe size (*i.e.*, pipe diameter), shall be in accordance with all applicable Williamson County building/plumbing codes.

3. Materials and components used in the construction of SDD systems shall be in accordance with the provisions outlined in *Appendix 12* and in accordance with the Drip manufacturer's specifications, guidelines, recommendations and requirements.

4. With the exception of pump tank capacity outlined above in *Subsection B, Part 13* of this *Section 39*, all septic tanks and pump tanks utilized in SDD systems shall conform to the provisions outlined in *Section 10, Section 14, Section 17* and *Section 18*.

5. The pump and all associated electrical components for Drip systems shall meet all provisions outlined in *Section 16* and *Appendix 12* of these regulations.

   Additionally, the control panel shall, at a minimum, contain features and functions necessary to accomplish the requirements outlined in this *Section 39*.

6. All supply and return manifolds, lines and pressure pipe network elements (*i.e.*, pipe and associated fittings) shall be constructed using Schedule 40 pressure-rated PVC or equivalent.

7. Any turn in the drip disposal line greater than ninety (90) degrees shall be made using flexible sections of PVC or functional equivalent. The drip line shall be secured to the flexible PVC using fittings manufactured for that purpose.

8. Drip disposal line shall be installed at a depth of eight (8) inches below the natural soil surface. A buffer of twelve (12) inches of undisturbed soil below the drip disposal line to rock or restrictive horizon shall be maintained throughout the disposal field. However, a buffer of sixteen (16) inches of undisturbed soil below the drip disposal line to a water table (*i.e.*, free water, seasonal high water table or perched water table) shall be maintained throughout the disposal field.

9. Drip disposal line shall be installed following the natural, existing ground surface contours of the designated sewage disposal system area.

10. Drip disposal line shall be installed in such a manner to prevent damage to the tubing and comply with the manufacturer's recommendations. The equipment used to install the drip tubing shall be specifically designed for that purpose.

    The use of standard trenching machines or the "drip and fill" method (*i.e.*, where the tubing is placed on the ground surface and soil fill material is placed over it) shall not be allowed unless specifically approved by the Department on an individual, case-by-case basis.

11. All headworks, valves (including, but not limited to, check valves, air / vacuum release valves, Schrader valves, flush valves and zone valves, etc.), filters, flow meters, and other miscellaneous components shall be housed in appropriately sized valve boxes with ground level access.

D. Design, Installation and Certification Requirements for Drip Systems

1. The Department shall require that all SDD systems proposed for use be designed and specified by an engineer licensed in the State of Tennessee as part of an overall subsurface sewage disposal system design plan package submitted to the Department for review and approval. Said design plans shall be subject to all appropriate provisions outlined in *Section 19, Parts C, D, E, F, and G*.

2. Only an individual certified by the Drip system manufacturer and licensed by this Department, in accordance with *Section 24*, shall install or personally supervise the installation of each ATS.

3. All Drip systems shall be installed in conformity with the approved design plans, the construction permit issued by the Department and in accordance with the Drip manufacturer's specifications, guidelines, recommendations and requirements.

   There shall be no deviations from said design plans and permit absent written approval from the Department and the engineer of record, if applicable.

4. The Department may require SDD system installation to be conducted under the direct on site supervision and oversight of the Drip manufacturer's representative.

5. The Department may require written documentation from the Drip manufacturer certifying the successful installation of the SDD system in conformance with their specifications, guidelines, recommendations and requirements. Said documentation may include a commissioning report, if applicable, of the successful start-up of the Drip system.

6. The Department shall require that the engineer of record provide on-site construction supervision and/or inspection of the SDD system installation.

   Said engineer shall also provide written documentation to the Department outlining his/her observations, findings and/or recommendations, along with a stamped/sealed as-built drawing certifying the successful installation of the SDD system in conformance with their approved design plans. The use of specific manufacturer supplied worksheets is recommended to document the installation specifics and all initial system settings and measurements.

E. Operation and Maintenance (O&M) Requirements for Drip Systems

Once a Drip system is installed pursuant to this *Section*, the owner of the property shall perpetually operate and maintain it properly in a safe and environmentally sound manner. This requirement shall run with the land and be binding upon all future owners of the property.

1. Qualified Service Provider

   (a) A qualified service provider, approved by this Department in accordance with *Section 40* of these *Regulations,* shall perform all routine operation and maintenance on SDD systems.

   (b) A qualified service provider must also be an approved maintenance provider with the State of Tennessee, Department of Environment and Conservation, Division of Water Resources (TDEC-WR) and provide proof of such to the Department.

   (c) Said service provider must also be certified by the Drip manufacturer for O&M purposes on the specific Drip system installed. The Drip manufacturer shall provide written notification to the Department of said service provider's qualifications.

2. O&M Manuals and Monitoring Plan

   Subsurface drip disposal systems shall be operated, monitored and maintained in accordance with the following:

   (a) The Drip system manufacturer's specific operation and maintenance manual.

   (b) The licensed engineer of record must prepare a system specific operation and maintenance manual that covers the entire system and all system components, including, but not limited to, the ATS device, the tanks

and the drip dispersal system. Said O&M manual shall be submitted to the Department in conjunction with the design plan package submittal.

Any changes or revisions to the O&M manual shall be made by the licensed engineer of record and approved by the Department.

3. O&M Frequency

Routine operation and maintenance site visits shall be performed at the minimum frequency specified by the Drip system manufacturer, for the life of the system. However, the frequency of system visits may be adjusted by the Department depending upon the Drip system's complexity, performance and manufacturer's recommendations.

4. O&M Services and Tasks

The routine operation and maintenance items to be completed at each site visit by the qualified service provider shall be in accordance with those referenced in the above-noted manuals and plans (referenced in *Part 2* of this *Subsection*).

Any major repair, modification or alteration to the system shall require the appropriate permits to be obtained from the Department in accordance with *Sections 7 and 34* these *Regulations* and shall only be conducted by an installer licensed in accordance with *Section 24* of these *Regulations*.

5. Submission of O&M Reports

A maintenance report shall be submitted to the Department on an annual basis detailing all inspections, the findings and any work performed. Said report shall be included with the associated ATS O&M report.

(a) For residential systems, the O&M report shall be due to the Department on the anniversary date of the system's *Certificate of Completion.*

(b) For commercial/non-residential systems, the O&M report shall be submitted to the Department in conjunction with the annual ATS Operation Permit application or renewal process (Refer to *Subsection H* of *Section 38*).

(c) Failure of a property owner to submit the annual O&M report as required shall result in the issuance of a Notice of Violation letter by the Department and/or revocation of the standing operation permit until compliance with this requirement is re-established.

F. General Requirements for Drip Systems

1. Subsurface drip disposal systems approved in accordance with this *Section 39* shall only apply to single residential or non-residential lots utilizing individual on-site sewage disposal systems in accordance with these *Regulations* for the treatment and disposal of wastewater.

This *Section 39* does not apply to systems serving multiple structures or multiple lots, to nontraditional wastewater treatment and disposal systems (*i.e.*, decentralized systems) governed by the Williamson County Zoning Ordinance, nor to those systems subject to the Water Quality State Operating Permit (SOP) requirements of TDEC-WR.

2. Drip System Approval

(a) The manufacturer of any Drip system proposed for use in Williamson County must have previous approval from the State of Tennessee, Department of Environment and Conservation, Division of Water Resources (TDEC-WR) and provide documented proof of such to the Department.

(b) All components of a Drip system shall be designed, manufactured and certified by the manufacturer for the specific use in wastewater applications.

(c) All pertinent data regarding the Drip system, including, but not limited to, design and configuration guidelines, installation guidelines, owner's manuals, maintenance requirements, authorized dealers, and warranty information shall be submitted, by the manufacturer, to the Department for consideration. If the Department determines that the Drip system meets the requirements of these regulations, the Department will inform the manufacturer in writing.

(d) The Department will maintain a list of approved Drip systems that have submitted the required information and are compliant with the requirements in these regulations. The Department may remove any Drip system if it fails to meet the requirements of this section or if its performance is deemed to endanger public health.

(e) To maintain SDD system approval, all Drip manufacturers shall maintain an adequate level of replacement parts and service.

3. The use of SDD systems for residential facilities/uses producing domestic strength wastewater flows greater than 1,500-gpd shall require TDEC-WR variance approval from their *Rule 0400-48-01-.15, paragraph (6), subparagraph (d), part 7*. Said variance approval shall be obtained prior to consideration for approval in Williamson County and documentation of such provided to the Department by the property owner.

4. The use of SSD systems for commercial non-residential facilities/uses may be considered by the Department on an individual, case-by-case basis.

5. SDD systems may only be used if the effluent introduced to the SDD system has been treated to secondary effluent treatment standards and the concentration of fats, oils and grease (FOG) is less than twenty milligrams per liter (<20 mg/L).

6. SDD systems proposed for use on any parcel of land (platted or unplatted; for residential or commercial/non-residential facilities/uses) shall be required to be designated as the primary system and shall be the initial system installed.

7. The property owner, any successor of the property owner and any subsequent property owner, for the lifetime of the system, shall have in effect a contract for operation and maintenance of the Drip system with a qualified service provider approved by this Department in accordance with *Section 40* of these *Regulations*.

   a) A copy of the executed contract shall be provided to the Department before any permit is issued for an ATS.

   b) These contracts will be reviewed by the Department on an annual basis.

      (1) Submittal of subsequent contracts, associated with residential systems, shall be due to the Department on the anniversary date of the system's *Certificate of Completion.*

      (2) Submittal of subsequent contracts, associated with commercial/non-residential systems, shall be submitted to the Department in conjunction with the annual ATS Operation Permit renewal process (Refer to *Subsection H* of *Section 38*).

   c) In the event that the contract is cancelled or not renewed for any reason, the property owner shall notify the Department within thirty (30) days of such cancellation and provide proof of a contract with a new approved service provider within that same timeframe.

   d) This requirement can be included with the ATS contract specified in *Section 38*.

   e) Failure of a property owner to maintain such a contract shall result in the issuance of a Notice of Violation letter by the Department and/or revocation of the standing permit until compliance with this requirement is re-established.

8. No manufacturer marketing an SDD system in Williamson County shall deny the sale of replacement parts or deny technical guidance to the Department, any Williamson County licensed installer or any Williamson County approved/licensed service provider.

9. All electrical components associated with subsurface drip disposal systems shall comply with and be installed in accordance with the requirements of the current edition of the *National Electric Code (NEC)*. All associated buried wiring shall be installed in appropriately sized conduit and shall have explosion proof seals (with approved seal compound) installed at both ends of the conduit. All associated electrical enclosures (boxes) shall have a minimum NEMA (National Electric Manufacturers Association) Type 4X rating.

   A State issued electrical permit shall be required for the installation and inspection of all electrical components associated with Drip systems.

   Refer to the applicable provisions outlined in *Section 16, Subsection F* regarding *Electrically Assisted Systems (EAS)*.