

**ARTICLE 9**

**CONSTRUCTION REQUIREMENTS**

**PART A: GENERAL**

**9A-1 SERVICE LINES:**

**9A-1-1**      **Construction.** Separate and independent service lines shall be designed, installed and constructed by the Property Owner at his sole cost and expense for every improvement requiring sewer service. Such service lines and any other sewer facilities located on the property shall be designed in accordance with the provisions and specifications set forth in Part C of this Article 9, and shall be installed and constructed in accordance with plans and design approved by the District, and applicable rules, regulations, standards and building codes.

(Cross reference: 5-5 MULTIPLE USE OF TAP PROHIBITED)

**9A-1-1.1**      Sewer service lines for multi-family units, commercial establishments or industrial users shall discharge directly into a manhole at the Main whenever feasible. Sewer service lines for single family residence shall be connected directly to the Main with a standard “wye” or “saddle” connection or may discharge directly into a nearby manhole where appropriate.

**9A-1-2**      **Maintenance.** The Property Owner shall be responsible for maintaining, repairing and replacing the entire length of the Property Owner’s sewer service line up to and including the wye, saddle, or other fitting or connection point on the Main and shall ensure that no root infiltration, surface water, or groundwater enters the District System through such service line or through the point of connection to the Main. The District may effect the repair or otherwise cure any such condition, and may charge the Property Owner the costs thereof as provided in Section 3-5, but the District is not obligated to effect any repairs or curative work on any Property Owner’s service line. All repairs and maintenance to the sewer service line must be performed by a licensed and bonded plumber.

(Cross reference: 3-12-10 Infiltration; 8-1-3 Groundwater; Surface Water)

**9A-2 CONTROL MANHOLES REQUIRED:** When required by the District, any Industrial User shall install and maintain at its sole expense a District-approved control manhole in the service line to facilitate observation, sampling and measurement of the wastewater flows.

**9A-3 PREVENTION OF FOOD-RELATED GREASE IN DISTRICT SYSTEM:** Food-related grease build-up in the District System is a significant concern, and grease management measures are required for all food service facilities to prevent the entry of fats, oils, and/or greases ("FOG") into the District System. The term "food-service facilities" includes all Users other than residential homes whose premises are used, in whole or in part, for the preparation, sale, or distribution of food, including, but not necessarily limited to, restaurants, cafes, fast food outlets, pizza outlets, delicatessens, sandwich shops, butcher shops, food banks, schools, churches, boarding houses with communal kitchen facilities, nursing homes, day care centers, and any and all other kinds and types of establishments in which any food preparation, cooking, cutting, processing, packaging, sales, or distribution takes place on the premises. It is the obligation of the Property Owner to notify the District of any use of the premises that falls within or may fall within the above definition of "food services facilities". Compliance with this Section 9A-3 and its subsections is the joint and separate responsibility of both the Property Owner and the tenant, if any, operating a food service facility, but the District holds the Property Owner ultimately responsible to ensure compliance. This Section does not apply to residential homes. For purposes of this section, the term "FOG" refers to animal and/or vegetable fats, oils, and greases. The term "grease" is also used interchangeably with the term "FOG".

**9A-3-1 Best Management Practices.** All food-service facilities are required to implement best management practices (BMPs) to minimize the generation and contribution of FOG to the sanitary sewer. The BMPs include the following:

- Scrape food from plates into a garbage can.
- Pre-wash plates by spraying them off with cold water over a small mesh catch basin positioned over a drain. This catch basin should be cleaned into a garbage can as needed.
- Install and maintain screens over all sinks and floor drains.
- Liquid and solid oil and grease from cooking equipment and utensils shall be collected into a waste grease bin.
- The collected FOG shall be managed and disposed of properly. Disposing of collected FOG generated from food service facilities into the domestic trash, the sanitary sewer, other surface waters or impervious areas such as parking lots, alleyways or landscaping is not proper management and is prohibited.

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- Other kitchen practices identified by District and/or facility which will decrease the point source discharge of FOG.
- Keep waste grease bins in areas protected from traffic and weather, and away from drains.
- Clean up grease spills by scraping up as much as possible before mopping.
- Clean hood filters in sinks that flow to a grease interceptor.

(Cross reference: 9A-8 CHANGES IN USE, EQUIPMENT OR SERVICE; 9C INTERCEPTOR DESIGN AND INSTALLATION STANDARDS)

**9A-3-2 Interceptor Required.** Unless granted a variance in writing by the District Board of Directors, all food service facilities are required to have an external grease interceptor sized and installed in accordance with these Rules and Regulations.

**9A-3-2.1 Size and Location; Plan Review.** All grease interceptors required to be installed by these Rules and Regulations shall be sized in accordance with the Littleton/Englewood Wastewater Treatment Plant's (Plant) Fats, Oils, and Grease (FOG) Policy, and the provisions of Part C of this Article 9 hereof. Grease interceptor systems shall also comply with the requirements of other governing jurisdictions including, but not limited to, the City of Centennial, the City of Greenwood Village, the City of Littleton, the 2009 International Plumbing Code (IPC), and Tri-County Health. Grease interceptors shall be located outside the building served on private property, and shall be so installed and connected as to be at all times easily accessible for inspection and cleaning. Grease interceptors shall not be closer than 3 feet to any building or property line. The plans for any connection of a grease interceptor to the District System must be reviewed and approved by the District Engineer, and the plan review fees paid, prior to making the physical connection. "Plan Review" includes but is not necessarily limited to review of the following:

- Site Plan, to review placement of interceptor for access
- Plumbing Plan, to review fixtures to be connected to the interceptor.
- Interceptor Shop Drawing, for conformance to SASD's specifications,
- Interceptor Plumbing Detail, for conformance to SASD's specifications.

(Cross reference: 7-3 Plan Review Fee)

- 9A-3-2.2**     **Installation and Maintenance.** The Property Owner shall install interceptors in accordance with the provisions of Part C of this Article 9 at his/her sole cost, and at all times use, maintain, clean and ensure the effective operation of any and all interceptors. The Property Owner may be asked to submit a Certificate of Maintenance to the District each time the interceptor is cleaned. The certificate must indicate the quantity of grease collected and removed at the time of cleaning. Based on historical records and certificates received by the District, the cleaning interval must be adjusted so as not to allow the interceptor to be more than twenty-five percent (25%) full of solids and grease at the time of cleaning. If the Property Owner fails to meet these requirements, the District may affect the necessary cleaning, maintenance or repairs, and may charge the Property Owner the cost thereof. Installation of an interceptor must be reviewed and approved by the District Engineer, and the field review (inspection and observation) fees paid, prior to final approval of the interceptor. "Field Review" is a type of inspection/observation that includes but is not necessarily limited to the following:
- Inspection/observation of interceptor installation.
  - Dye testing of facility, to determine whether the appropriate fixtures are connected to the interceptor and that those fixtures that should not be connected to the interceptor do not connect.

(Cross reference: 3-12-3 Interceptor Violations; 7-3 Plan Review Fee; 7-4 Inspection and Observation Fees; 7-18 Annual Inspection Fee)

- 9A-3-2.3**     **Inspection; Notice of Violation.** The District may go upon the property where any interceptor is installed to inspect such interceptor from time to time as it deems necessary. The Property Owner shall be liable for all annual and additional Inspection Fees as provided by Section 7-18 above. Facilities that are required to pump and/or repair interceptors, as documented by inspections, shall be given written notices of violation. Pumping and repairs shall be completed within a maximum of five (5) calendar days and fifteen (15) calendar days, respectively, upon written notice of violation. Facilities with violations shall be re-inspected following the elapsed time period to ensure compliance.
- (Cross reference: 3-12-3 Interceptor Violations; 7-18 Inspection Fee)

- 9A-3-2.4**     **Grease Interceptor Pumping Schedules.** Initially, all Users connected to grease interceptors will be required to pump out their interceptors quarterly or every three (3) months minimum. Inspections of the grease interceptors by the District will determine if this frequency needs to be

increased to control the amounts of oil and grease entering the sanitary sewer system or if the pumping frequency can be decreased.

**9A-3-3 Interior or Internal Grease Traps Not Permitted in Lieu of Grease Interceptor.** The District will not grant a variance permitting an interior or internal grease trap (“grease trap”) in lieu of a grease interceptor.

**9A-3-4 Biological Treatment.** Biological treatment shall not be a substitute for the pumping of the grease interceptor or grease trap at the frequency determined by the District.

**9A-3-5 Existing Sources Not Connected To Grease Interceptors.** Existing sources not connected to grease interceptors and that generate significant amounts of oil and grease will be identified through inspection of the collection systems by the control authorities, which include the Industrial Pretreatment Division of the Treatment Plant and the District. Once these sources are identified, they will be required to implement BMPs identified in Section 9A-3-1 to keep FOG out of the sanitary system. If the BMPs are not successful at the facility and the facility continues to contribute significant amounts of FOG to the sanitary sewer, as documented by field inspections, then the facility will be required to install an adequately sized grease interceptor.

**9A-3-6 Records.** Facilities with grease interceptors, grease traps, and/or waste grease bins are required to maintain receipts, paid invoices, work orders and other documentation of all purchases of such equipment, repairs, parts, maintenance operations, and cleaning for a minimum of three (3) years and have these records accessible for review.

**9A-4 OIL, SAND/SEDIMENT INTERCEPTORS:** A sand interceptor is a device designed and installed to separate and retain sand, solids, petroleum hydrocarbons, and other related undesirable matter from normal wastes and permit normal liquid wastes to discharge into a wastewater collection system by gravity. Facilities that discharge any quantities of sand or other inert debris into the sanitary sewer service shall have a sand interceptor installed on the sewer service line. Examples of such facilities include but are not limited to: automobile service stations, fleet maintenance stations, mechanical repair shops, car washes, garden nurseries, warehouses, and parking garages with floor drains. Sand interceptors shall not be required for private residences or dwellings. The purpose of this requirement is to minimize the loading of sand and petroleum hydrocarbons from entering the collection system and the Treatment Plant.

- 9A-4-1**      **Location; Plan Review.** All oil or sand/sediment traps required to be installed by these Rules and Regulations shall be located outside the building served on private property, shall be so installed and connected as to be at all times easily accessible for inspection and cleaning, and shall not be closer than 3 feet to any building or property line. The plans for any connection of an oil or sand/sediment trap to the District System must be reviewed and approved by the District Engineer, and the plan review fees paid, prior to making the physical connection. “Plan Review” includes but is not necessarily limited to review of the following:
- Site Plan, to review placement of interceptor for access.
  - Plumbing Plan, to review fixtures to be connected to the interceptor.
  - Interceptor Shop Drawing, for conformance to SASD’s specifications,
  - Interceptor Plumbing Detail, for conformance to SASD’s specifications.

(Cross reference: 7-3 Plan Review Fee)

- 9A-4-2**      **Installation and Maintenance.** The Property Owner shall install oil and sand/sediment traps in accordance with the provisions of Part C of this Article 9 at his/her sole cost, and at all times use, maintain, clean and ensure the effective operation of any and all such traps. The Property Owner of each facility for which such a trap is required may be asked to submit a Certificate of Maintenance to the District each time the interceptor is cleaned. The certificate must indicate the quantity of oil, sand or sediment collected and removed at the time of cleaning. Based on historical records and certificates received by the District, the cleaning interval may be adjusted so as not to allow the trap to be more than twenty-five percent (25%) full of a combination of solids and grease at the time of cleaning. If the Property Owner fails to meet these requirements, the District may affect the necessary cleaning, maintenance or repairs, and may charge the Property Owner the cost thereof. Installation of an interceptor must be reviewed and approved by the District Engineer, and the field review (inspection and observation) fees paid, prior to final approval of the interceptor. “Field Review” is a type of inspection/observation that includes but is not necessarily limited to the following:
- Inspection/observation of interceptor installation.

- Dye testing of facility, to determine whether the appropriate fixtures are connected to the interceptor and that those fixtures that should not be connected to the interceptor do not connect.

(Cross reference: 3-12-3 Interceptor Violations; 7-3 Plan Review Fee; 7-4 Inspection and Observation Fees; 7-19 Annual Inspection Fee)

**9A-4-3**      **Use.** Sand interceptors shall not be used as a means for disposal of spent or spilled chemicals, automotive or other commercial or industrial fluids, sludges, or other substances. Sand interceptor use is limited to wastewater generated during normal operations from facilities described in section 9A-4 above. Normal operations include but are not limited to: floor wash down, car or truck washing, and heavy equipment washing.

**9A-4-4**      **Sizing.** South Arapahoe Sanitation District has adopted the Littleton/Englewood Wastewater Treatment Plant's (Plant) Petroleum Oil, Grease, and Sand (POGS) Policy, which can be found online at: <http://www.Englewoodgov.org/Index.aspx?page=1015> The sizing criteria is described in the Plant's policy. Sand/Oil interceptor systems shall also comply with other governing jurisdictions including, but not limited to, the City of Centennial, the City of Greenwood Village, the City of Littleton, the 2009 International Plumbing Code (IPC), and Tri-County Health.

**9A-4-5**      **Inspections and Categories.** The District may go upon the property where any sand interceptor is installed to inspect such interceptor from time to time as it deems necessary, and the Property Owner shall be liable for the annual and any additional Inspection Fees as provided by Section 7-19 above. The inspection program inventories all sand interceptors and documents the inspections of these interceptors.

**9A-4-5.1**      **Pumping.** Facilities are required to pump their sand interceptor at a minimum, annually, or when the total accumulation of surface oil and settled solids reaches twenty-five percent (25%) of the sand interceptor's overall liquid depth. Pumping will include removal of entire interceptor contents. Partial removal of contents (i.e., removal of oil layer or sludge layer) is not allowed. Contents removed from interceptors shall be hauled off site

and disposed of properly. Inspections of sand interceptors will determine if their frequency needs to be increased to control the amounts of sand or debris entering the sanitary sewer system or if the pumping frequency can be decreased.

**9A-4-5.2**     **Repairs.** All facilities are required to structurally maintain all components of the sand interceptors as per design requirements.

**9A-4-5.3**     **Follow-Up Inspection.** Facilities that are required to pump and/or repair interceptors, as documented by inspections, shall be given written notices of violation. Pumping and repairs shall be completed within a maximum of five (5) calendar days and fifteen (15) calendar days respectively upon written notice of violation. Facilities with violations shall be re-inspected following the elapsed time period to ensure compliance.

**9A-4-6**     **Existing Sources Not Connected to Sand Interceptors.** Existing sources not connected to sand interceptors that generate significant amounts of sediment and debris will be identified through inspection of the collection systems by the control authorities, which include the Industrial Pretreatment Division, cities of Littleton and Englewood, and the District. Once these sources are identified, they will be required to implement Best Management Practices (BMPs) identified in the Plant's POGS Policy. If BMPs are not successful at the facility and the facility continues to contribute significant amounts of sediment and debris to the sanitary sewer, as documented by field inspections, then the facility will be required to install an adequately sized sand interceptor.

**9A-4-7**     **Records.** All records of maintenance of interceptors, removal of interceptor contents and of off-site hauling shall remain on-site for a minimum of three (3) years and accessible for review.

**9A-5**     **SWIMMING POOLS:**

**9A-5-1**     **Residential Connections Prohibited.** No person shall connect or permit to be connected any filter backwash system or swimming pool drain for a pool located on the property of a single family residential home, nor shall any

discharge of any kind or nature from such a swimming pool be permitted to enter the District System.

**9A-5-2**      **Community Swimming Pools; Permit Required.** Community swimming pools are swimming pools associated with multifamily residential housing developments, parks, schools, recreation centers, health/athletic clubs, country clubs, churches, etc. that are not single-family-residential. No person shall discharge or permit to be discharged any Community Swimming Pool Discharge into the District System without first obtaining a Permit therefor as provided in Section 5-10, and except in conformity with conditions of any such permit and these Rules and Regulations. At a minimum, the plans for any connection to the District System and a filter backwash operating plan must be reviewed and approved by the District Engineer, and the plan review fees paid, prior to making the physical connection. The connection of the filter backwash system may be a separate tap on the main, or may be connected to the service line of an existing tap for the property. Swimming pool filter backwash effluent only may be discharged into the District System. Pool drains may not be connected to the District System.

(Cross reference: 2-35 SWIMMING POOL DISCHARGE; 5-10 SWIMMING POOL PERMIT)

**9A-5-3**      **Inspections.** The District may inspect any facilities designed or utilized to permit Swimming Pool Discharge to enter the District System, and Property Owner shall be responsible for payment of the Inspection Fees as provided by Section 7-4.

**9A-6**      **PRIVATE DISPOSAL SYSTEMS:** Any person permitted to own and operate a private wastewater disposal system shall be responsible to operate, clean, maintain, and dispose of waste materials from such system in accordance with the terms of any permit. In no event shall waste materials or effluent from such system be discharged into the District System.

(Cross reference: 1-12-2 Exemptions)

**9A-7**      **CERTAIN DRAINS PROHIBITED:** No drain may be connected to the District System which would or could permit groundwater or surface water to enter the District System. This prohibition applies to foundation and basement drains, pool drains, and any and all groundwater and surface water drainage structures or systems, without limitation. Sump pumps shall not be connected to or permitted to discharge into the District System without express written permission by the District.

(Cross reference: 3-12-5 Prohibited Drains)

**9A-8 CESSPOOLS AND SEPTIC TANKS:** No connection to a District Main will be permitted if the service line extends through or from a cesspool or septic tank.

**9A-9 CHANGES IN USE, EQUIPMENT OR SERVICE:** Property Owner shall notify the District at any time the use being made of his property changes in such a way that any grease or sand interceptor will or may be required under Section 9A-3 and 9A-4, or a Swimming Pool Permit will be required under Section 9A-5. For a change in building use to a use requiring a larger Tap, *e.g.*, from warehouse to office, Tap Fees shall be paid for the larger Tap according to the Tap Fee schedule then in effect, with an amount subtracted as a credit for the previously paid fees. The amount subtracted shall be adjusted so that it reflects the current fee schedule. For a change in use to a use for which a reduced Tap size would be sufficient, *e.*, office to warehouse, no adjustment will be made.

(Cross reference: 8-1-15 False Official Statement; Report; 3-12-13 Failure to Notify of Use Changes)

**9A-10 SPECIAL SERVICES:** The District may enter into special contracts for the provision of sewer service if it is in the District's best interests to do so, as determined by the Board of Directors.

**9A-11 CONSTRUCTION CONSULTANTS:** The District may enter into contracts with one or more consultants in connection with construction projects in which the District has an interest. Such consultants may be individuals or companies in any profession or trade that, at the discretion of the Board, is deemed capable of providing needed testing, information, pre-construction work, or other assistance, including, but not limited to, design engineering, soils engineering, hydrological engineering, surveying and construction staking, and project supervision. Contracts with such consultants shall be subject to the provisions of Section 9B-1-9, and all subsections thereunder, pertaining to insurance coverage. For purposes of Section 9B-1-9 and its subsections, the term "Contractor" shall include any and all construction consultants as herein defined.

(Cross reference: 9B-1-9 Insurance)

**9A-12 PRIVATE LIFT STATIONS:** The District has determined that lift stations constitute a source of maintenance and operational problems, and should be avoided if practicable. Where there is no alternative alignment that would allow gravity flow of wastewater from any served premises to the District System, then a lift station will be permitted subject to approval by the District of the design and discharge rate of such lift station. The purpose of such approval is exclusively for the purpose of ensuring that the discharge from the lift station does not exceed the anticipated flow from such served premises based upon the number of SFE taps issued for such premises, and the such lift station shall be a private facility, not part of the District System, and the District will assume no responsibility for the

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sufficiency, quality, operation, repair, maintenance or replacement of such lift station. Such lift station shall at all times conform to the District's requirements, and to Tri-County Health Department specifications.

**9A-13 CAR WASH HOLDING TANKS:** Car wash operations may be required to install holding tanks sized to reduce peak flow to the sewer system. In any event, such holding tanks shall not have less than 10,000 gallon capacity. When holding tanks are determined by the District to be necessary, they shall utilize a pump to discharge water from the holding tank to the sewer system. The maximum flow rate of the pump for the installed condition shall not exceed the rate of flow approved by the District.