

INFILTRATION TRENCHES

- 1) Infiltration trench systems are intended for use in infiltrating runoff from single-family residential roof downspout drains on private property.
- 2) This detail applies to small site projects, as described in Appendix C, 2016 King County Surface Water Design Manual (KCSWDM). For projects other than small site, use design criteria in Section 5.2 in the 2016 KCSWDM.
- 3) Infiltration Trenches containing a perforated pipe and receiving runoff from an area other than single-family residential roofs (examples include driveways & access roads, or any area from a multi-family or commercial site) are considered UIC wells and must be registered with WA State Dept. of Ecology. Additional information about the WA State Dept. of Ecology Underground Injection Control (UIC) Program can be found at the following website: [www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html](http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html)

DESIGN REQUIREMENTS

- 1) Refer to Pre-Approved Plan Policy D-8 for soils information requirements for flow control BMPs.
- 2) Existing soils in the location of the infiltration system must be coarse sands or cobbles, or medium sands and cannot be comprised of fill materials where the infiltration device will be located.
- 3) Trench bottoms must be a minimum of 1 foot above seasonal high groundwater level.
- 4) Infiltration systems may not be placed in sensitive area buffers, or on slopes greater than 25%.

DESIGN CRITERIA

- 1) Refer to sizing criteria in the 2016 King County Surface Water Design Manual, Appendix C for infiltration trench sizing based on SCS Soil Classification.
- 2) Minimum spacing between trench edges shall be 4 feet.
- 3) Maximum trench length must not exceed 100 feet from the inlet sump.
- 4) An infiltration filter (CK-D.04) shall be installed upstream of all infiltration trench systems to trap debris prior to entering the system and to allow for maintenance by the owner of the system.

SETBACKS

- 1) A minimum 5-foot setback shall be maintained from any structure, property line, or NGPE.
- 2) A minimum 15-foot setback from buildings onsite or on adjacent properties with crawl space or basement elevation that are below the overflow point of the infiltration system.
- 3) A 50-foot setback is required from steep slope hazard areas or landslide hazard areas.
- 4) Infiltration systems shall be located 30 feet down slope from any septic tank/drain field onsite or on adjacent properties, and a minimum of 100 feet upslope from any septic tank/drain field onsite or on adjacent properties. All septic tank/drain field systems shall be identified and shown on plan set prior to infiltration system approval.
- 5) Infiltration trenches shall only be placed under 6" thick driveways, cleanout must meet CK-S.09, and 2' minimum cover.

COMPACTION PROTECTION AND SEDIMENTATION CONTROL

The infiltration area and a 5-foot buffer must be fenced prior to construction and until final stabilization of the site to prevent soil compaction by construction activities. For exposed infiltration trenches, silt fence shall be installed around this constructed perimeter to prevent sedimentation of the facility.

INSPECTION

- 1) For projects that are using infiltration trenches to meet an exemption, reduced the size of a detention facility, or flow control facility will require a special inspection. See policy D-8 for requirements of special inspection.

CITY OF KIRKLAND	
PLAN NO. CK-D.22A	
	INFILTRATION TRENCH NOTES