

Lancaster County Water & Sewer District General Sewer Notes

- 1.) **These notes are not inclusive of all Water & Sewer Specifications; please refer to Lancaster County Water and Sewer District Standard Water & Sewer Specifications for detailed information. All of the following is at contractor's expense along with any other required infrastructure as determined by Lancaster County Water and Sewer District (LCWSD).**
- 2.) For additional information on and most recent LCWSD Sewer Specifications and/or Developer Policy, please visit our web site www.lcwasd.org or contact LCWSD sewer superintendent or Inspector.
- 3.) Engineer is to schedule a pre construction meeting with Contractor, LCWSD's Inspector(s), John Hudson (803) 804-1452 and/or Jason Gainer (803) 320-2138, and any other necessary agencies, with a required minimum of five working days notification prior to pre-construction meeting.
- 4.) Contractor is to contact LCWSD's Inspector(s) 48 hours prior to starting construction: John Hudson (803) 804-1452, and/or Jason Gainer (803) 320-2138
- 5.) Contractor is responsible at contractor's expense for ensuring and obtaining all necessary permits and approvals prior to construction. These permits may include, but are not limited to; grading, demolition, zoning, building, driveway, detention, subdivision special use, water and sewer permits and approvals.
- 6.) Developer's Engineer must verify that all lots are capable of having gravity sewer service with the required slope to the lot at front set back to meet requirements of gravity service to finished floor elevation. Developer's Engineer must make a special note on construction drawing for all lots that will require residential pump stations for sewer service at Developer's expense. LCWSD will require all pumped lots to have a force main tying into the nearest gravity manhole, approved by LCWSD.
- 7.) Contractor is fully responsible for contacting all appropriate utilities and assuring that utilities are located prior to the commencement of construction, as required by SC Law. Contractor shall verify location and depths of all existing utilities prior to construction.
- 8.) Developer's contractor is responsible for repair and replacement of fences, mailboxes, driveways, and flowerbeds. And any/or all similar structures disturbed and/or all damage to property and/or utilities during construction or until and prior to LCWSD approval and acceptance of ownership to operate and maintain, and permit to operate has been issued by SCDHEC.
- 9.) LCWSD prohibits any and all planting of trees and/or shrubbery or building of any structure on or within sanitary sewer right-of-way easement areas.

- 10.) All sanitary sewer rights-of- ways are to be grassed as described in LCWSD's Standard Specifications.
- 11.) All construction and materials shall be in accordance with applicable State, Federal and Local regulations, and most recent LCWSD's Standard Sewer Specifications for Developers, and South Carolina Department of Health and Environmental Control regulations for wastewater facility construction.
- 12.) When underground obstructions not shown on construction drawings (rock, piping, etc.) are encountered, the Developer's contractor shall promptly report the conflict to the Developer's Engineer and LCWSD's Inspector. All changes must be approved in writing by the Engineer and approved by LCWSD's Inspector before construction can proceed.
- 13.) Ductile iron interior coated pipe (H₂S induced corrosion resistant) is required for sewer lines if the following clearances are not met. A minimum of 18" vertical separation between water and sanitary sewer main(s) at crossings, a 10' horizontal separation for water lines running parallel with sewer lines, and 10' horizontal separation between sanitary sewer force main(s) and 18" vertical separation between potable water.
- 14.) Ductile iron interior coated pipe (H₂S induced corrosion resistant) is required for sewer lines if the following clearance is not met. A minimum of 18" vertical separation between storm sewer and sanitary sewer crossings.
- 15.) **All manholes with forcemain connections shall have interior coatings (H₂S induced corrosion resistant) in accordance with LCWSD's Standard Sewer Specifications.**
- 16.) All Ductile iron pipes shall be coated with approved coatings as described in LCWSD's Standard Specifications.
- 17.) All sewer lines in excess of 14' in depth and/or where less than 36" minimum cover can not be maintained shall have interior coated ductile iron pipe for a length no less than the distance over 14' and/or less than 36" cover.
- 18.) Sanitary sewer lateral locations maybe subject to field relocation if field conditions require such changes and approved by LCWSD Inspector, the contractor may make field adjustments to lateral service based on field conditions in order to maximize or obtain the gravity service to any lot. The contractor will be responsible to verify with Engineer that each home site can be served by subject sewer lateral.
- 19.) All sanitary sewer service laterals shall be located in the center of each lot unless otherwise approved by LCWSD.
- 20.) All 4" PVC sewer service line should have no less than 1' slope per 100' of distance. All 6" PVC sewer service line to have no lees than 6" slope per 100' of distance.
- 21.) All sanitary sewer manholes are to be above flood plane as determined by Developer's Engineer.

- 22.) All main gravity sanitary sewer pipes are to be SDR 35 PVC unless otherwise noted by Engineer or LCWSD.
- 23.) All sewer force main pipe to be C-900 PVC **unless otherwise noted by Engineer or LCWSD.**
- 24.) All sanitary sewer services are to be Schedule 40 PVC.
- 25.) **Contractor shall ensure all compaction testing requirements meeting SCDOT standards are met for all sewer lines and water lines installed inside the SCDOT rights-of-way. Tests must occur every 1000 feet. Pipe must be C-900 or Ductile Iron Pipe when installed in SCDOT rights-of-way.**
- 26.) All clean outs are to be located at property line and/or rights of-way.
- 27.) All sanitary sewer force mains must have 12 gauge stranded coated tracer wire duct taped to top of force main pipe, to insure proper location of force mains for future reference.
- 28.) In order to provide rights-of-way access all creeks, drainage ditches, or tributary's that flow across sanitary sewer rights-of-way are to have stabilized ford crossings or plastic corrugated tiles sized by Developer's Engineer to adequately handle water flows as required by federal state and/or local regulations.
- 29.) All creek crossing methods and detail of work to be performed must be approved by LCWSD's Inspector and/or Sewer Superintendent, and must have prior Federal, State and/or local required approval.
- 30.) **Where installation of a sewer line crosses wetlands, streams, or other surface water sources; the engineer shall evaluate the requirement for anti-seepage plates if the potential exists to drain a wetland, stream, etc. or to facilitate erosion due to the movement of groundwater along the periphery of the pipe.**
- 31.) **All sewer easements are to be shaded on preliminary/construction plans so as to be easily distinguished from other instructions on plans. Access ability to easements for maintenance equipment must be identified and must be other than between lots (or as approved by LCWSD.) In no event shall an easement have greater than a 4:1 slope for maintenance reasons.**
- 32.) LCWSD's sewer service responsibility ends at road right of way property line.
- 33.) All air release valves must be intended for sanitary sewer use only and should be located at highest elevations along force main, as stipulated by Engineer on Construction plans. Also Engineer must send sheet of each and every air release valve used on force main to LCWSD's Sewer Superintendent with, valve location, date valve installed, valve make, valve model # and working pressure, valve serial number. Air release valve information shall also be included on final correct and approved project as-builts for LCWSD.
- 34.) Gravity sewer service connections shall be a maximum of five feet in depth at the property line of each lot unless a greater depth is required to obtain gravity sewer service. All sewer

service shall be visually marked a minimum of 4 feet above ground elevation. Marker can be 4"x4" pressure treated post, 4" PVC pipe or other approved by LCWSD and painted sewer green. All sewer services shall be shown on the as-built drawings with measurements from the nearest downstream MH and the distance stubbed off of main.

- 35.) Correct project as-builts are required prior to issuance of Service Authorization Letter provided to Engineer per (LCWSD) Developer Policy As-built requirements are on pages 30 thru 33 in the Developer Policy, Developer Policy can be found at www.lcwasd.org.
- 36.) All materials and equipment submittals to be submitted to (LCWSD) for approval prior to ordering and prior to pre-construction meeting with (LCWSD) inspector and be in accordance with LCWSD Standards and Specifications and South Carolina Department of Health and Environmental Control regulations.
- 37.) Engineer to provide (LCWSD) with copy of certification letter for Approval by (LCWSD) of system (s) water/sewer Engineer is requesting certification on **prior** to sending to SCDHEC for permit to operate. Certification letter is to include (sewer) number of manholes, length of pipe associated with size and type, number of lots to be served with lot number (s), and flow associated with number of lots.
- 38.) Any existing water or sewer infrastructure that will be located under pavement within SCDOT's Right-of-Way, as a result of any road improvements associated with a development, must be relocated at the Developer's expense. LCWSD shall approve the relocation plan prior to implementation.